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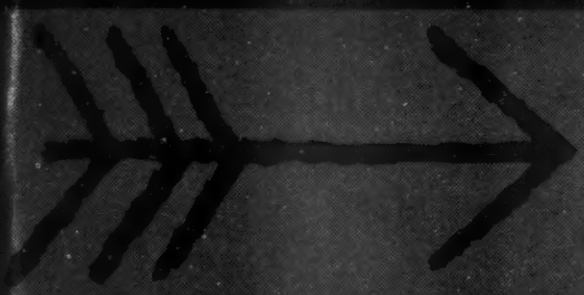

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School Counselling
Sixth Form Problems
Large v. Small Schools
School-College Courses
Child Development
Belgian Primary Education
Teachers Centres
Physical Education

JULY 1971

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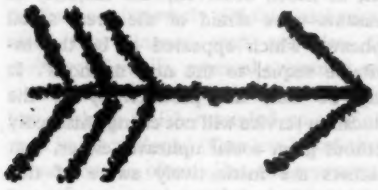

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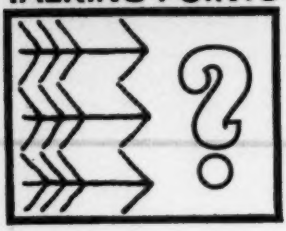
TALKING POINTS



By Question Master

Why Innovate?

There is a sad little passage in a recent Schools Council working paper.* Considering some of the constraints on innovation it says:

> Hostility to change, especially on the part of teachers in leadership roles, was likely to lead to failure with even the most enthusiastic individuals. One solution suggested was that innovation should begin by attempting to solve existing dissatisfactions. This was likely to win over more colleagues than the expression of a general vague desire for change. . . .

It is an odd commentary on the way we now look at things that we should want to innovate for any reason other than to solve existing dissatisfactions—as though change were in itself meritorious. But it does raise the question what makes people welcome change and what makes them resist it. If we devoted to this question a fraction of the thought now being expended on the nuts and bolts of educational change we might make faster progress, or alternatively stop hammering at doors that are not going to open.

Some years ago the question of attitudes to change was put to a conference of psychologists by Marc Bloch the medievalist. He suggested that some societies were more routine minded and others more accustomed to change, and went on to discuss possible reasons. He pointed out for example that groups within a society may react differently according to the nature and extent of their own vested interest, offering as illustration the resistance of country people in Europe to the agricultural revolution of the eighteenth century. It may be recalled that the objective of the reformers at that time was to increase the productivity of the land; but, as Bloch observed, 'the majority of peasants were afraid of the great social upheaval which appeared to be the inevitable sequel to the new methods'. It may be that the productivity of the education service will not change markedly without great social upheaval either, that teachers are instinctively aware of this and that, like the European peasants of two centuries ago, they are afraid of it. Bloch says the peasants were justified, and perhaps the teachers are too?

Most educational reform, however, is not put forward in terms of higher productivity—at any rate productivity which lends itself to quantitative measurement. If thirty boys following Nuffield science emerge with a better grasp of scientific method than thirty boys following the traditional course, the productivity of the teacher and his tools is presumably greater. The argument for adopting Nuffield science is not however put in those terms. Indeed it is sometimes difficult to get educational innovators to state their objectives in any precise terms at all.

Is this exaggerating? The Schools Council working paper, which describes a conference where project staff and heads of schools explored ways 'in which help can be given to heads whose specialist teachers become interested in using new materials and new ways of teaching', admits

> Some project directors appeared to be unwilling to state their aims precisely and it appeared that little progress could be made until they realised that each individual project was one among many and needed precise identification.

Surely a project to change ways of doing things needs precise identification even if it is not one among many, even if it stands all alone. Teachers are still entitled to know what the project is for and what it is about. 'Change', the working paper continues, 'could not proceed more quickly

* Working Paper No. 33 *Choosing a curriculum for the young school leaver*. HMSO Price 26p.

than the capacity of schools to absorb it'—as though the purpose of schools is to absorb change rather than to educate children.

If change is thought of as a desirable end in itself (which may by no means be the case) it is inevitable that we shall start looking for the obstacles to change to see if they can be got out of the way. The conference apparently did this, and recognised five: finance, staff attitudes, the mobility of pupils, parental pressures, and examinations. Not surprisingly 'it was the last of these which occupied most of the time in discussions.' (One has heard those discussions so often.) But the representative of an examining board pointed out that the boards acted on briefs from teachers and on many boards there was in fact a teacher majority both on the committees and among examiners. The simple truth may be that teachers, whether sitting on examining boards or planning the work that is to be examined, will not rush to embrace change unless it appears to be a desirable object. And who could blame them for such abstemiousness?

History is instructive on this point. It furnishes countless examples of changes which were not made whey they could have been. The use of water power to drive machines was known in the West for a thousand years before it was generally adopted. The Muslims knew about block printing for almost that long without making much use of it. It was a thousand years too before the decimal system found its way from India into a commercially conscious Europe. The reason why some hitherto neglected innovations are eventually taken up and quickly become widely adopted is usually that a problem has arisen for which they provide a solution. When labour was scarce and there was a lot more corn to mill men suddenly saw the point of water mills. When underdeveloped Muslim countries wished to modernise they saw the point of cheap print for mass education. When Pisan and Genoese traders started making money fast they wanted something a little quicker than the Roman abacus.

Twentieth century teachers, like medieval artisans or Renaissance entrepreneurs or modernising Muslims, will welcome innovation not as innovation but because it is just what they have been looking for. So what *are* teachers looking for? Reading a chapter on trends in curriculum planning in a new paperback, *The School Curriculum*, by W. Kenneth Richmond, may provide a few useful starting points.

First, he points to the difficulty of educating all pupils with 'an academic curriculum originally designed for an able minority' destined for the learned professions. Secondly, there is the difficulty of knowing what subject matter to select from a rapidly growing field. ('The sheer impossibility of learning everything about something has also cast doubts on the possibility of learning something about everything.') Thirdly, with a longer school life for a generation that is more mature and sophisticated than any previous generations, how do teachers induce and retain cooperative attitudes? These are certainly some of the real problems to which secondary school teachers would welcome some answers; the wider range of ability, the wider range of knowledge, the greater worldliness of the young. Where teachers are snapping up innovations with a cry of recognition it is probably because they have a bearing on one or more of these problems. Where project directors find their offerings mysteriously spurned it may be because they relate to other problems than those which press hard in the classroom.

Alternatively innovating project directors may create more problems than they solve. Guy Rogers, introducing the Schools Council paper, writes: 'Even those heads who are convinced of the need for change and want to innovate may find the problems of selection and innovation somewhat daunting.' The conference briefly entertained the heretical thought that choice was not, after all, 'all that important for pupils'; perhaps it also toyed with the thought that choice was one thing too many for teachers as well. What about a project on the integration of integrated studies, was one suggestion. On the whole however the conference seems to have been against a new orthodoxy. According to the official report it seldom faced squarely 'the

problem of considering the secondary curriculum as a whole.' This was perhaps reassuring rather than otherwise, since the working paper is about *choosing* a curriculum.

One of the appendices mentions 'the basic weakness of many teaching programmes, that of equating the curriculum with course content rather than with learning experiences.' It would be a basic weakness also no doubt to equate it with the learning experiences. In practice it probably has to be half one and half the other, half course content and half learning experience. Is it not precisely because the right combination can only be known at the point of learning that the teacher must be free to choose? The point is well put in an article in a recent issue of the *Journal of Curriculum Studies*. A curriculum, says David Wheeler of the Leicester School of Education, 'performs an advisory function. The advice will only be effective if the teacher (and writers etc.) know how to translate the aims of the curriculum into actions which will ensure that the desired learning takes place.' He argues that the pre-school child already applies 'to data provided by his experience mental powers which are basic constituents of the mathematician's algebra'. The teacher's task, he suggests, is to find 'ways of giving children access to their own powers'. If one were setting out to look for an answer to the question 'Why innovate?' it would be difficult to find a better starting place than that.

Small v Large

The article by Dr Elizabeth Halsall in the April issue, bringing out some favourable factors affecting small comprehensive schools and showing what could be done with a 3 form entry became something of a talking-point in the educational press. *The Times Educational Supplement*, welcoming the 'powerful considerations' brought forward by Dr Halsall, noted that most of the argument hitherto had turned on 'the size of teaching groups and the range of subjects which can be offered at sixth form level.'

This aspect of the matter is in fact rehearsed in considerable detail in the present issue of *Trends* by Dr T. I. Davies who takes as his starting point the argument that about 1,000 pupils (6 form entry) is the minimum size known from experience to avoid the more obvious disadvantages of the two extremes. Dr Davies himself was educated in a one form entry country grammar school with an age range 13-18. He joined HM Inspectorate as a specialist in agriculture and by way of farm organisation and management became interested in O and M in schools. He published a book on *School Organisation* in 1969.

The author of a third article in the series, Celia Barker, also writes against a rural background. As district HMI in Westmorland, she has become acquainted with the problems of a small rural education authority whose 3 or 4 form entry comprehensive schools do, she believes, fulfil an educational and social purpose.

The debate will continue, and we leave the countryside for the conurbation, in the October issue when the headmaster of a school which expanded from 3 to 8 form entry in five years, tries to count the cost and the blessings.

This America

Gentlemen,

Please send me a copy of your journal, Trends in Education, the issue containing an article about The Netherlands which appeared in January, 1970; perhaps you can also tell me where I can get a reprint of it if you cannot send me a copy. I am a student at the University of California at Los Angeles, and their library copy has been stolen . . .

Stolen indeed! Is nothing sacred?

One girl in ten has a problem for the school counsellor. Most of the staff can help.

School Counselling

ANNE JONES

Mrs Anne Jones was counsellor at Mayfield School when she wrote this article. She is now Deputy Head of Thomas Calton School, London, S.E.15.

Well, do we need counsellors in schools or not? It is now six years since the first courses for training school counsellors began; each year a small but steadily increasing number of trained counsellors feed back into our schools. Yet within the counselling profession, we find many of the problems of growth and development normally attributed to our adolescent clients: the search for identity, for a role, the need for reassurance and recognition. Although the climate of educational opinion is now much more favourable towards counselling than it was in 1965, those of us who are counsellors still wait for our educational elders to accept us as grown-up members of the school community. In the meantime, it is interesting to note that groups of counsellers, who originally kept their distance from one another, have now pooled their individual differences in the common cause: the launching January 1971 at national level of the standing conference for the advancement of counselling is a landmark in British counselling history.

Yet despite six years of diverse experimentation, the amount of evaluative research into the effects of counsellors in schools remains disappointingly slight. Whereas originally counsellors were perceived as aides to educational and vocational guidance, they have made most impact in the sphere of personal development work. There is, I feel, a real danger that educational and vocational guidance will remain neglected. In the absence of any policy statement, few schools have the courage to face the implications for curriculum and staffing which a fully integrated guidance and counselling service provides. These are matters which need serious consideration.

My own work as a counsellor in a comprehensive school has been limited to the field of personal development. My experience over six years has convinced me of the need for personal counselling and bears out the estimate made by Sir Alec Clegg and Barbara Megson in their book *Children in Distress*. They state that only 2 per cent of our children are helped by the specialist social services, they estimate that another 10–12 per cent need preventive help and receive very little. My colleague Shirley Dunkley and I found that in each form of thirty girls, seen systematically in their 3rd year at secondary school, ten have problems of some kind that they would like to talk over with a counsellor. Of these 10 girls (one third of each form) probably only 3 or 4 have problems sufficiently worrying to them to call for sustained counselling or referral to another agency. But the figure is still high: 3 in 30 is 1 in 10. 10 per cent of the girls in school need counselling during adolescence. They may turn to their form tutor or some other favourite teacher for guidance and support, they may choose to see one of the school counsellors, or they may prefer to go it alone, supported by their peers. But the need is there, and the teaching staff accept that

it is not realistic for the form tutor to carry the responsibility for preventive work single-handed. In a caring school community it is important for the staff to work together as a team and to recognise that there are limits to the amount of time and energy and expertise they can devote to each individual girl. Thus, in 1965, came the demand for a counsellor, someone to whom the students could turn spontaneously and in confidence when they felt the need. The idea was to provide a preventive rather than a remedial service: to help individuals through temporary crises; to help adolescents with normal developmental problems; to refer to specialists where appropriate early, rather than as a last desperate measure; to work towards improving communications within and between the school, the home, the community and its resources; to support teachers who are helping individuals in their care but who themselves want reassurance and guidance. The fact that we did not attempt to undertake educational and vocational guidance did not mean that we did not think these important: simply that we had to set some limits on an already mammoth task. One point rapidly became clear, namely, that counselling, far from being a kind of educational frill, is a fundamental part of the educational process: Counselling is not advice-giving or solving other peoples' problems for them. Counselling is basically a relationship through which an individual is helped, by facing his conflicts realistically, to grow to greater maturity. Counselling should therefore be a learning and a growing experience.

Initially, we saw the work of the counsellor principally in terms of helping individual students either through personal counselling or group discussion. Consultations with staff were held with the main aim of clarifying or communicating some point about a student. Over six years the emphasis in our work swung subtly: it seems to me now that one of the aims of a counsellor should be to make himself redundant. I say this with reservations for there will always be individual cases where the professional skills and special role of the counsellor are needed. But an important task for any counsellor is to train and develop the natural talents which the staff have for helping individuals. When a student turns to a teacher for counselling rather than the counsellor (and this is bound to happen) the counsellor's job is not to snatch the client away from the teacher but to make himself available to the *teacher* should he want to talk over what is happening. 'Supporting' the teacher, in this context, does not mean telling him what to do, or (necessarily) backing him up in what he is doing, for this could result in unhealthy collusion. It means helping the teacher to work out for himself what is happening and why; the process is in fact remarkably similar to counselling itself. So when, for example, Miss White heard in confidence that one of her form was experimenting with pot, she turned to the counsellor to discuss the matter. She knew the counsellor would keep the information to herself, yet talking it over helped her deal with the situation. Thus, precipitate action (and breach of trust) was avoided, though the situation was kept under review through regular discussion. If the staff perceive the counsellor in this way, not as a terrifying expert, but as a trustworthy ally, then they will begin to discuss problems and difficulties as they arise. This makes preventive work a greater possibility. Contact and co-operation between the counsellor and the form tutor of clients is vital. The form tutor, as the person who sees a

pupil day by day, in formal and informal surroundings, has a great deal to contribute to the counsellor; in other words, the feed-in and feed back system is reciprocal, not one-sided. Both teacher and counsellor learn from sharing.

When the difficulties faced and provoked by an individual girl escalate to an unbearable point, we have also found it invaluable to convene a special discussion between all those staff concerned. This helps de-escalation: the staff are able to look at their role in a more objective and unpressurised way. The chain of command is something else we have modified. Miss Hayman, for example, had made very good contact with a girl in her form who was unhappy and wanted to leave home. She was the person to whom the girl had confided her problem and it seemed therefore more constructive for the teacher rather than the counsellor to phone the Childrens' Department to discuss the case. The counsellor was able to provide the name and extension number of the appropriate social worker. This meant that the social work department was also involved early in the problem and not after it had exploded in some way. Thus the counsellor becomes a useful resource point for the teacher, someone who not only listens but who also provides useful information about sources of help based on personal contact. Sometimes a counsellor can arrange for a social worker to come into school to meet the staff, either for a general or for a case discussion.

A school counsellor can do a lot to improve communications and understanding between teachers and social workers; the kind of restricted language code which operates as a barrier between these two professions can be broken down if both parties learn each other's language. Similarly, ethical questions to do with confidentiality, the fine line which is to be drawn between helpful background information and gossip, can be clarified. Teachers can begin to see the dangers of 'labelling and stereotyping' which may come about if everyone knows, for example, that Mary Smith's mother has a lover; social workers may understand more the feelings of frustration and impotence felt by teachers who never receive any feedback about individuals they have referred. Counsellors also have a duty to breakdown the 'us and them' syndrome. Once any group of people thinks that they (be they teachers, parents, social workers, or counsellors) have done *everything* they could, but *they* (that is parents, or social workers, or counsellors, or teachers) are a complete waste of time, then the communication/co-operation system begins to break down. The fact that attempts to co-operate sometimes do misfire or backfire merely reveals our inexperience: it is not an excuse for giving up, rather an incentive to try harder or more carefully next time. Writing anybody off as useless, is the best way to *make* them useless: we all need respect, encouragement and credit if we are to draw out and develop our positive qualities.

Who are the people who come to a school counsellor for help? They are essentially a normal cross section of the school community. What the counsellor does for them is very hard to measure. Certainly the counsellor is not a kind of magician or miracle worker, who can prevent individuals from damaging themselves if they want to. The counsellor is not a controller but a developer, not an organiser but an enabler. What the counsellor can do for an individual is to form a warm, empathic, unpossessive and accepting relationship through which the

client feels sufficiently secure and valued to look at what he is doing with his life and to himself. Supported but not overprotected by the counsellor, the client can look at the blockages to his full growth and development, which may be within himself rather than in his environment, and gradually adapt and change. But the process is gradual, it is not guaranteed, without the full co-operation of the client it is never easy.

The kind of problem brought to the counsellor is infinitely varied; many are to do with the search for identity, for the answers to the questions 'Who am I? What am I? What sort of a person do I want to be?' At the root of many of the problems is a breakdown in the communication of feelings, most normally in the relationship with the parents, though sometimes with friends, siblings or teachers. Girls may feel misunderstood, undervalued, mistrusted, overprotected, underprotected. They may find it difficult to tell their parents how they feel and the counsellor may help them indirectly to do this. When the parent does not exist, through death or separation, (and often when the parent *does* exist), the counsellor may fulfil a role as a supplementary parent, caring but not colluding, warm but not possessive, concerned but not cramping. A form tutor may well offer the same kind of relationship, but she has to be shared with 29 other girls: the counsellor can give time and individual attention. To illustrate the flexibility demanded in the counsellor, let us consider some typical clients: *Valerie's* mother died when she was 12, she was sexually assaulted when she was 13; *Megan*'s parents did not want her in the first place, she lived with her father until she was seven, and then was taken back by her (remarried) mother; *Jo* doesn't know whether her father is the man her mother divorced just before she was born, or the man who came to live with her mother after that. *Angela* isn't sure whether she is a boy or a girl; *Mavis* has no relationships with her classmates and spends all her spare time watching television and playing with dolls in her bedroom; *Martha* thinks her sister had an illegitimate baby which has been hushed up; *Monica* suspects that her sister is her mother and her mother her grandmother; *Janet* thinks she has some dire illness but, in fact, is about to menstruate for the first time. *Paula* is a West Indian whose parents won't let her go out at all. *Jessica*'s mother tells her to go out more when she doesn't want to; *Pat* who thought she was pregnant; *Jennifer* didn't know how to say 'no' to her boy friend; *Julie* wanted to know how to get 'the pill'; *Karen*'s mother was having an affair with a student; *Mary*'s mother had just gone into a mental hospital; *Susanna* sleeps with her boy friend though officially she's not allowed out with boys at all; *Mandy* hates her mother so much that she is afraid she might hurt her physically; *Carolyn* is trying to break up her parents' marriage because she can't bear to share her mother with her father; *Claire* has experimented with pot and is worried; *Bridget* has experimented with LSD and says she is not worried. *Lesley* feels the teachers pick on her; *Rosalie* has been excluded from all lessons because her behaviour is so disruptive.

These are all typical problems. Clearly they pose many problems for the counsellor; legal, moral and ethical questions. One of the great needs of the counselling profession is for guidance on these very delicate points. It seems to me both worrying and dangerous for counsellors to be appointed into a vacuum, without either terms of

reference, supervision or support. What does a counsellor do if he learns of intercourse before the age of consent, of experiments with drugs, of possible moral danger? Has the counsellor the right to keep this information from the parents, the head, other social workers? It would save the counsellor a lot of anxiety if he could automatically pass the buck and the responsibility on to somebody else. But if it became known in the school that the counsellor reported such matters, I am certain that individuals would *not* talk about these problems unless they *wanted* them to be brought into the open. The net result would be that a lot of insecure students would not be able to get help until some irreparable damage had been done: anyone who became pregnant would be helped discreetly and officially, but what about those who are simply 'at risk'? Whilst a counsellor may work towards bringing the parents in, it is no answer to say that parents should automatically be informed, not if the counselling service itself is to fulfil its avowed aims. The issue is a very complex one.

It is of course always possible for a counsellor to consult professional colleagues in confidence about this and any other kind of case: the educational psychologist, the school doctor, the child psychiatrist, the child care worker, the moral welfare worker. By consulting these highly skilled specialists the counsellor is doing two things: first he is relieving his own anxieties, which helps him to help his client more effectively. Second, he can be advised by the appropriate expert whether referral or action of any kind is advisable. But in the last analysis, it is the counsellor who is carrying the responsibility. He may decide to tell the head and the parents the whole truth, against his client's wishes, and he may warn his client first that he is going to do this and explain why. He may decide to say nothing. It is a decision which he should not have to make alone.

One of the points not very often made about counsellors is the effect their job has on them. Any thinking and feeling counsellor is brought up against a persistent questioning of the value system of the school and the society in which he is working. So while the counsellor is helping his client to 'liberate his potential for growth and development', the counsellor inevitably grows and develops too, and may find at the end of the day that he, too, wants to question and change the fabric of the community in which he works. This raises a fundamental point of discussion: should the counsellor work solely with clients or should he be action-orientated as well, seeking to modify the framework of society so that it more nearly meets the *actual* needs of its members? To what extent can the counsellor do this without losing his valuable role as a neutral 'outsider' working within an institution? Because of the amount of consumer feed-back received by any counsellor, it seems important to me that counsellors should be involved in policy decisions in schools. Furthermore, it seems to me that the kind of training and experience given to a counsellor fits very well with the latest trends in curriculum development and teaching methods: the kind of group discussion proposed by the humanities project, for example. There is a growing movement to include 'personal development' as a part of the curriculum in the secondary schools: to encourage learning about oneself, rather than learning about subjects, to develop and timetable exercises for helping individuals to learn to make decisions, to become more self aware, more sensitive to the needs of others, more able to choose a job when the time comes.

Some university teachers regard the present sixth form curriculum as a regrettable necessity to be lived with because the schools like it. Some teachers see it as a regrettable necessity imposed by the universities.

Examinations and the Sixth Form

MARTIN ROBERTS

Martin Roberts is head of the history department and tutor to the sixth form at an Essex comprehensive school.

The aim of this article is to explain how university selection procedures affect contemporary sixth forms and to suggest possible modifications. Their influence is more extensive than most university teachers realise and, as the range ability within sixth forms widens, more detrimental. I have recently moved from a direct-grant grammar school in Yorkshire to a comprehensive school in Essex. The distortions which selection procedure caused to the grammar school curriculum were serious but they do not compare with those apparent in my present school. Of course, much of the trouble is due to strenuous competition for university places combined with the impossibility of making completely fair selection with the methods available to us. However, present procedures exacerbate the situation and might be significantly improved.

Schools see university selection procedures as having four chief elements—'A'-level grades, the head's report, 'O'-level/CSE results and interviews. Since there are now so many universities and so many faculties within universities each with their own selection emphases, it is difficult for schools which must prepare their candidates *generally* for university entrance to be sure of the relative importance of these elements. Clearly 'A'-level grades are crucial as the UCCA process nears its end. Head's reports and 'O'-level results are important in the preliminary selection for provisional offers while interviews may appear, significantly but unpredictably, in the middle of the process. As selection instruments, each of these is open to criticism. Much the least satisfactory however, is the use of 'O'-level grades—a practice which now appears to be widespread. In 1967, the Schools Council Working Paper No. 16 noted guardedly that 'the achievements of a pupil in the GCE examination at 'O'-level and/or CSE form part of the evidence taken into account in determining his suitability for admission to a university'. A *Times* article of August 12, 1970, was more explicit. 'GCE pass grades and the (head's) report . . . are the main deciding factors at the first sifting.' The 'O'-level examination was and is devised as an attainment test for 16 year olds, not as a selection test for 18 year olds. I know of no systematic study of the validity of 'O'-level grades as a selective instrument. Unsystematic study over the years would suggest it to be very low since the academic development of sixth formers is often quite unpredictable. To assume that 'O'-level grades are useful predictors of suitability for university courses is not only unfair to individuals but pushes the scramble for grades back into the fourth and fifth years of the secondary school. In many subjects the form of the 'O'-level examination is such that stereotyped teaching methods and sheer 'cramming' pay off in terms

of results. The more grades as well as passes are felt to matter, the more intensely such methods will be used.

The Effect of 'A' Level

As far as the sixth form curriculum is concerned, the impact of these selection procedures takes a number of forms—firstly on particular 'A'-level subjects, secondly on the balance of subjects taken by university candidates, thirdly on the whole sixth form curriculum and fourthly on the quality of life of sixth formers.

The unsatisfactory educational consequences which stem from the scramble for high grades using the traditional 'stand and deliver' 'A'-level examinations have been clearly stated in Part I of the Schools Council Working Paper No. 20. Sometimes this paper overstates its case but its central argument is essentially correct. The argument is this. Most 'A'-level exams which test syllabuses defined in terms of content rather than aim, and which sample the content defined syllabus in two or three written papers at the end of two years, put too much emphasis on memory and too much pressure on teachers to present their subject in the form which is most easily reproduced as an answer to the crucial half-hour question. I am constantly aware of these pressures and constantly compromise with them. Many university teachers may argue that teachers have no need to compromise. If they decide to pervert their teaching in order to achieve examination success (if success it brings) that is their choice and they can hardly push the blame onto the universities. But it is not so simple. Most teachers, while accepting a responsibility towards their subject, see their first responsibility as being to their pupils. We know that, since universities attach prime importance to high grades, for virtually all our 'A'-level candidates (and their parents) these grades are the goal however they are achieved. Those of our pupils who fail to achieve the necessary grades will not be consoled by the thought that we at least did not pervert our teaching for examination success! So we play the examination game for all we are worth. Our freedom of action is largely illusory.

The balance of subjects within the sixth form curriculum is a most complex and vital issue. Since, however, the two Schools Council Working parties are at present actively rethinking their proposals, comment here about breadth and depth in terms of the number of subjects studied would be superflous. My chief concern is general studies which whatever number of subjects is eventually recommended will remain a major broadening factor in the sixth form curriculum. In recent years, many schools have developed imaginative and intellectually demanding sixth form general studies courses. It is perhaps too often assumed, however, that thanks to this development, a satisfactory balance is within reach. It is not. Those of us responsible for organising such courses may sometimes show imagination and sometimes intellectual rigour but our task is virtually impossible. We seldom have more than 3/4 periods per week in which time we attempt to introduce our pupils to as many significant areas of human experience as we can, as well as to indicate possible philosophical approaches for interpreting this experience. My present dilemma is whether or not to continue with psychology which has proved much more popular than I expected. If I do, Marx or morals will have to be dropped! Even the most sympathetic headteacher must refuse requests

for more time since he is under constant pressure from specialist teachers to give more periods to 'A'-level work. As long as universities specify high grades at 'A'-level and indicate only a vague or sporadic interest in the general studies work of their candidates, the power of this work to balance the curriculum will remain limited.

Sixth Form Objectives

The distorting effects of university selection procedures are most marked when one considers the sixth form curriculum as a whole. Since a university place is so generally prized, to get to university is the ambition of far more pupils than will ever achieve the entry standard. University teachers may well expect schools to direct such pupils to more realistic goals and organise courses more appropriate to their needs than 'A'-level. However, the unpredictability of sixth form performance makes such direction extremely difficult. Take, for example, two pupils who were in my 'A'-level set at my last school in 1968/69. One entered the set with excellent 'O'-levels. Both his parents and his fifth form tutor thought of him as a possible Oxbridge candidate: unfortunately he proved quite unable to cope with 'A'-levels and, though he struggled on for two years, 'O'-level turned out to be his intellectual peak. In contrast was a 5B boy whose 'O'-level results were so poor that only with reluctance did the headmaster yield to parental pressure and allow him into the sixth at all. Those of us who taught him reckoned at first that he would be lucky if he scraped bare passes. However, not only did he work very hard but he matured intellectually far more than the rest of the set, achieving three Bs at the end of two years. In my present sixth form, the picture is the same. On the one hand there is a young woman who originally looked a good candidate for university but who in her first year in the sixth found that while her 'A'-level subjects became an increasing struggle she had a real flair for secretarial and commercial work. Consequently she now takes but a distant interest in her academic studies. On the other, there is a lad who was only allowed into the sixth with misgiving since he gave no indication of the powers of concentration and self-discipline necessary for a successful sixth form career. In his first year, his academic progress was unimpressive and he was twice nearly expelled for cutting lessons. He has now settled down and is one of our strongest 'A'-level candidates. Cases such as these make it impossible for us to do much selection at the beginning of the sixth form course. We have to be optimistic about our pupils and give them the chance of realising their aspirations even though many must fail to realise them. Thus university selection procedures not only affect the sixth form studies of all those who try to get into universities (which is almost double the number of those who actually get in) but also of the many sixth formers who, though taking an 'A'-level course, eventually do not bother to fill in an UCCA form at all.

Furthermore, university selection procedures indirectly affect the curriculum of those sixth formers who never intend to go on to university or to any further education institution. Their number is increasing fast and most, at present, do but a single year in the sixth form. Their curriculum is one of the least satisfactory in English secondary schools, consisting usually of O/CSE level repeats plus whatever else (and often it is not very much) can be slotted into their timetable. Schools have not done much to develop more coherent courses for this group because,

since 1964, the Schools Council has given priority to the reform of the sixth form curriculum as a whole and some radical restructuring involving both the 'new' and the 'traditional' sixth former has seemed imminent. Until a firm decision is reached on the form of this restructuring—and university entrance requirements are one factor among many which are making this decision so hard to reach—it will remain extremely difficult for schools to develop effective programmes for this group.

Finally, there is the impact of selection procedures on the quality of life of sixth formers. One of my constantly recurring tasks is to remind my form that they are not, on the whole, working hard enough. In line with many sixth form tutors all over the country, I recommend about 3 hours a night, 4 nights a week, plus 6 hours or so at weekends. This is an enormous workload, appreciably more than is expected of the same age-group in most advanced industrial countries and far more than any schoolteacher, don or self-respecting trades-unionist would dream of shouldering for any sustained length of time. It does not ease the problems of growing-up. In the course of last term, two (at least) of my form became involved in serious love affairs. Though both are among the most mature of the group and would be a credit to any institution of further education if they are able to reach the entry standard, their work has gone to pieces. I am keeping my fingers crossed that during the holidays their relationships have either stabilised or broken up since preparation for 'A'-level and traumatic love-affairs are incompatible. Schools and universities might give careful consideration to whether, with increasingly early maturation, it might not be in the interests of their students' personal and psychological development to reduce the work-load of the 16–18 age-group and compensate by increasing that of the 19–22 age-group.

Possible Reforms

After so much criticism, some positive suggestions are called for. In the longterm, many of the ill-effects of our present 'stand and deliver' 'A'-level examinations might be eliminated if aims-based syllabuses and methods of assessment replaced the present content-based approach. The aims or objectives of most sixth form courses are definable in terms of cognitive skills to be mastered along lines similar to those suggested in Bloom's *Taxonomy of Educational Objectives*, Volume 1, The Cognitive Domain. If sixth form courses come to consist increasingly of skills to be mastered rather than facts to be learnt so the emphasis on the accurate memorisation of rapidly reproducible chunks of information would lessen. It should also be possible to identify a hierarchy of skills of which the higher order ones would indicate suitability for a university honours course. Thus aims-based examinations could become more efficient predictive tests than our present ones, while remaining appropriate attainment tests for a range of ability appreciably wider than potential honours students.

In many schools all over the country, mixed-ability courses and methods of assessment are being successfully established for the 11–14 age-group. In the foreseeable future, sixth forms will be far more homogeneous in motivation and ability than these 11–14 groups. I cannot see any insurmountable difficulty in organising appropriate courses without having to distinguish between those sixth formers who are going out to universities or further education and those who

are not, especially if the vital task of defining aims and skills is undertaken jointly by university specialists, sixth form teachers and educational psychologists.

In the short-term, a number of modifications to university selection procedures would improve matters for schools. Scholastic Aptitude Tests, drawing on American experience, should be included amongst the variety of evidence to be used. These have the merit that, unlike 'O'-level and 'A'-level grades, they are designed as predictive tests. Heads' reports should be more standardised, perhaps asking for a numerical rating on a ten-point scale for the qualities listed on the UCCA form to reinforce the verbal comments. Universities should also insist on a specific assessment of the candidates performance in general studies with a brief description of what his general studies course entailed. The present form merely asks the headteacher to comment 'on any relevant aspect of the school's policy—concerning the curriculum, 'O'-level entries, 'S' papers and classes attended in minority subjects not examined'.

The change, however, which would do most to lessen the detrimental effects of university selection procedures would be to concentrate the process into a much shorter time, preferably after the 'A'-level results were known. If 'A'-levels were held in May and the university term began in November, surely it would be possible, using modern data-processing techniques, to compress the whole UCCA procedure into the intervening five month period? Such a minor change in dates would render superfluous the use of 'O'-level grades. Headteachers' reports could be written in April instead of, as now, the previous October. They would therefore be based on a knowledge of most of the candidate's sixth form course not, as now, the first half only. They could also include the candidate's results in the schools 'mock' examinations which would act as a useful check on the 'A'-level grades. Such evidence, reinforced by summer post 'A'-level interviews and Scholastic Aptitude Tests would be much more wide-ranging, more up to date and therefore fairer than present procedures. And their side-effects on secondary school practice would be considerably less harmful. Modifications of this type must plainly add to the already considerable responsibilities of University Admissions Tutors and the UCCA administration. Since, however, the impact of university selection procedures on the secondary school curriculum are so considerable, one can only hope that these further responsibilities are speedily assumed.

A second article in a series on the pros and cons of small and large secondary schools.

The Minimum Size of School

T. I. DAVIES

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In the last five years education authorities have been encouraged to aim wherever possible at about 1,000 pupils (i.e. 6 form entry) as the minimum size of comprehensive schools, a size now known from experience as one that avoids the more obvious disadvantages of the two extremes. This article is concerned with what happens to a comprehensive school when it falls substantially below this size. A danger in dealing exclusively with the minimum, however, is that of implying that the maximum size of school does not matter, or indeed that there should be no maximum. Let this danger be avoided at the start, by expressing the view that the small school is from its nature the better kind of school; but that to do its job in today's circumstances it cannot afford to be too small. Small secondary schools are due only in part to the dictates of physical and human geography; more often it is a matter of having inherited some former pattern of schools, embodied in buildings many of which are too good to scrap yet too widely scattered for each of them to collect 1,000 pupils.

It is not the number of pupils but the number of teachers and rooms that determine the size and scope of a school's curriculum. The number of pupils only intervenes to decide the average class size within that curriculum, and the average class size that can be afforded in any one school, or group of schools, depends entirely on the rest of the system. What we have now is an evolutionary product, an existing system the complexity of which defies any attempt at sorting out the educational from the economic minimum. Our scales of staffing and premises are more or less standard: too standard, perhaps, in the case of some authorities who work to a simple teacher:pupil ratio. Others have learnt from working their primary schools that size variation is a reckonable factor; they accordingly apply to their secondary schools a sliding scale as opposed to a simple ratio one. Taking one authority with another, a scale which seems to fit the staffing of schools for pupils aged 11 to 18 makes a basic allocation of one teacher to every 22 pupils with a 'bonus' of at least 4 teachers over, plus the headmaster. The ratio of 1:22 secures for all schools an average class size in Forms 1–5 of around 27 pupils (depending on the free-period allowance per teacher), whilst the effect of the 4-teacher 'bonus' is not only to reduce the average class size, but to do so more markedly in a small school than it does in a large one. By this means justice of a sort is dispensed to all; and in considering our 6fe school it will be consonant with prevalent practice if we assume a staff scale of 1:22 and 4 teachers over.

The Six Form Entry School

Let us take a look, then, at this school of 900 (i.e. 30 x 6 fe x 5 years)

plus 80 sixth-formers making a total of 980 pupils, with a staff of 48.5 teachers (980/22+4). Given 6.5 periods 'free' out of 40, these teachers between them will teach for 48.5 x 33.5 or 1,620 periods weekly. It never fails to impress, this fact that the total of a school's teacher periods (i.e. the spaces in the school time-table) so greatly outnumbers the total of pupils that there are on the books of the school. Its implications are staggering when it is recalled that until very recently this atomic particle served as the standard unit of curriculum construction; almost as if one set about building a cathedral by concentrating on the bricks, and trusting the architecture to unfold itself through a periodic counting of the bricks, especially those in the heap remaining. Recently, however, the school curriculum has been subjected to a graphic technique, that by proceeding from sketches to working drawings determines the curriculum's architecture before ever a hand is laid on the 'bricks' of the teacher-periods. This is not the place to describe this technique beyond saying that the inspiration of it is the sliding scale, the idea of 'basic-and-bonus', and that through applying it to the comparative study of schools we have got to know a great deal about the planning features which headmasters in fact write into their curricula. Suffice it to use this knowledge in the context of our 6 fe school, and to say that the heaps of the teacher-periods, as laid out for curriculum building, would conform fairly closely to this pattern:

Teacher Periods	*Allocation for small groups*	*Average size of class*
Year 1 = 265	(25)	27·4
Year 2 = 260	(20)	27·7
Year 3 = 270	(30)	26·6
Year 4 = 305	(65)	23·8
Year 5 = 320	(80)	22·8
Year 6 = 200		
1620		

From such data as we now possess, this analysis represents a pretty fair average of practice in organising this type and size of school. In the table the bracketed figures represent the special (teacher-period) allocations made to set up smaller classes, and which permit an average of 3.3 periods per form (= 20 periods, total) for the crafts in years 1–2 plus 5 periods of remedial reading in Form 1. Then in Form 3 the allocation is stepped up from 20 to 30 periods, so as to introduce most probably a 5-period Latin option that is balanced with say a metalwork/needlework option for pupils who are good with their hands.

Now for two longstanding categories of pupils for whom a headmaster is usually at pains to provide what resources he can spare; the backward pupils and the 'O'-level and CSE repeaters. In this school the year group is big enough (180) to permit one of the six forms in each of years 1 and 2 to be treated as a specialist remedial department with classes of say 18 pupils; the cost of this is a graduation from 34 to 28 pupils in the other five forms and, moreover, it is seen by comparing the figures for years 1 and 2 that 5 extra periods—one daily lesson—are provided for withdrawing the non-readers, however few they may be, into a group for separate instruction. Then at the other end of the scale, Form 5 in comparison with Form 4 is seen to have 15 periods a

week reserved for repeaters: probably a 4-period class in each of English and mathematics, and a 2/3-period class in each of 3 other subjects. The treatment meted out to these two groups of pupils is by no means ideal; but it is not unreasonable.

Turning now to the core of subjects, the headmaster in dealing let us say with Forms 4–5 (a budget of 305 periods each) is faced with a decision as to the total number of classes he will organise. Will he make them few, with the idea of giving to most of them 5 periods each in the week? Or will there be a larger number, with a goodly proportion of classes getting 4 periods a week? Or will he vary the diet of subjects to the extent of creating a good sprinkling of classes that get only 3 periods each in the week? An ex-teacher of history, perhaps, our headmaster may recall certain pupils who soared through O-level yet a fortnight later were under the illusion that the Tudors followed the Stuarts! On reflection this was poor education. Better in his view to allow time for digestion to follow ingestion; to sacrifice curricular scope in order to secure as many as possible of 5-period classes—provided the consequent reduction in the number of subjects taken by the pupil did not mean specialisation and a distortion of balance in his course. The headmaster's decision now made, let us on our part notice his confidence in assuming the freedom to choose; his faith that this freedom was inherent in the dimensions of the 6 fe school. We shall see how he gets on.

In terms of a 5-period average per class, the Form 4 (and 5) budget of 305 periods works out to 61 classes; to which must now be attached labels to identify the subjects and their levels of study. Once more there is a field of choice, but let us suppose 6 parallel forms with the following numbers of pupils, the two smallest of them (24 each) being the 'Newsom' forms:

34 33 33 32 24 24

Each of these 6 forms will pursue certain minority-time subjects like religious and physical education, which together are the equivalent of a class getting 5–6 periods a week; and by subtracting these from the 61 we are left with a budget of 55 classes. The possible ways of using this budget are numerous, but let us say that the headmaster comes out with this pattern:

Analysis of 55 Classes in Form 4 and Form 5)

Subjects	*O-level*	*CSE*	*'Newsom'*
English	2	2	
French	2	1	
Latin	1		
German	1		
History	2	1	
Geography	1	1	Integrated
Shorthand		1	Studies
Typing and Office Practice		1	Equivalent
Mathematics	2	3	to 10
Physics	1	1	classes
Chemistry	1		
Biology	1	1	
Art	1		
Art and Design		1	
Music	1	1	
Wood	1	1	2

Metal		1		2
Technical Drawing		1		
Cookery	1	1		2
Needlework		1		2
	18	19		18

As for the courses leading up to this pattern through Forms 1–2–3 it is necessary to say only very little. A year group of 180 pupils is large enough to satisfy, in respect of most subjects, the one condition upon which courses can be given an early start in the school, and that is the ability of the subjects concerned to attract around 30 (or 60, or 90) pupils each; thus in this school it would be easy to carry German in addition to French down to Form 1. The same condition satisfied, the school would also have freedom in its choice of differentiation patterns and options; so that German and French could from the start be taught in either form classes or sets. It is only with subjects that demand smaller classes, either because of their teaching conditions (the crafts) or their lack of appeal (perhaps, Latin), that the headmaster's freedom of action is curtailed so that he is obliged to make special allocations of staffing resources.

If in Form 6 the 80 pupils take 3 subjects each at A-level, there will be an aggregate of 240 units that appears as 124+116 at the foot of column (2) of the table below, in which column the units are divided among 13 subjects in the way that experience suggests. Then in column (3) a total of 170 teaching periods is similarly divided, leaving 30 periods for minority-time studies.

(1)	(2)		(3)		
Subjects	*Pupils*		*Periods per week*		
	1st Yr.	2nd Yr.	1st Yr.	(1st+ 2nd Yrs.)	2nd Yr.
English	20	18	7		7
French	11	10	7		7
Latin	4	4	2	(6)	2
German	9	8	7		7
History	14	12	7		7
Geography	9	11	7		7
Art	4	5	2	(6)	2
Music	2	3	2	(6)	2
P. Maths	11	9	7		7
A. Maths	11	9	7		7
Physics	12	9	7		7
Chemistry	10	10	7		7
Biology	7	8	6	(2)	6
	124	116	75	(20)	75

Out of his total budget the headmaster has felt free to make special if modest provision for two categories of pupils, the backwards and the repeaters. With a confidence which may well have since wavered he assumed the freedom to give a 5-period duration to most of the subject classes in Forms 4–5; and by doing this he safeguarded another freedom, because with fewer subjects to cater for he could afford to give them all, except Latin, an early start in the school, and to carry them on to 'A'-level.

Another freedom that so far has gone unnoticed, but which is seen in the Form 4 analysis (above) to derive from the budget of 55 classes, is the one that allowed the headmaster to organise 19 subject courses leading to the CSE, as compared with 18 to 'O'-level, and to permit the 'Newsom' pupils to spend a quarter of their time in half classes of only 12 pupils. And, of course, another freedom guaranteed by the size of the year group (180 pupils) is the one that permits the headmaster to go in if he wants to for rather fine ability setting in mathematics and English, if not in some other subjects up to Form 3. In the midst of these freedoms the headmaster, however, is assailed by a nagging doubt as to the wisdom of his decision to reduce the budget of classes in Forms 4–5 through making them last 5 periods each in the week; because through dividing in this way the 40-period week into eight time-blocks (5 periods each) instead of nine (4.4 periods each, average), he lost 7 or 8 subject courses leading up to the examinations taken at 16+. Parents who call at the school in support of the claims of their children are quick to enquire why some other school, only a mile or two away, is able to offer a wider variety of subjects. The factors of complexity and mobility in modern society combine to press the headmaster for a revision of his scheme to secure a more varied diet of subjects, but with smaller portions: only if he follows this plan in Forms 4–5 he will be advised to go slowly because 'special' resources might then have to be diverted to Forms 1–3, to give the new subjects an early start; and they will almost certainly make extra demands in Form 6. Anyone who looks carefully at the range of courses already provided in this school and also appreciates the fact that modern society is becoming increasingly complex, increasingly mobile, must surely agree that the dimensions of the 6 fe school are near critically minimal. And even more surely, he must feel for any headmaster who has to perform so complex and delicate a balancing exercise.

Below Six Form Entry

Even more delicate, however, (or should one say ruthless) is the balancing task that faces the headmasters of schools which fall substantially below 6 fe. The fact is that on the sliding scale (1:22+4) the school loses 7.3 teachers for every form that is dropped from its annual entry; which means that, after grading off the 'free' periods of teachers who now teach rather smaller classes, the school's total budget is reduced by some 235 periods of teaching for every form dropped from the entry. These reductions are shown at the foot of the table following, in which the school's total budget of teacher periods is broken down into year groups, according approximately to what one finds in practice:

Teacher Periods

Forms	6 fe	5 fe	4 fe	3 fe
1	265	221	179	137
2	260	216	174	132
3	270	229	187	145
4	305	264	222	182
5	320	276	230	182
6	200	179	158	137
—	1620	1385	1150	915

Comparison of the Forms 1–2 figures reveals the same device of withdrawing the most backward pupils for a daily lesson of reading in the first year; only these are withdrawn from classes which become less and less in the nature of remedial groups. In fact, in the 3 fe school they probably do subjects like English and mathematics in one class with some quite able pupils. And as for the second of our categories of pupils, the examination repeaters, comparison of the figures for Forms 4–5 shows less and less special provision being made for them, until in the 3 fe school they have to take their chance in one class with pupils a year younger.

Turning now to the subjects and classes provided in Form 4 (and 5), the progressive drop from 305 periods (6 fe) to 182 periods (3 fe) spells a restriction that is somewhat impressive. This time there is hardly any question of the headmaster feeling free to give an average of 5 weekly periods to only some 36 or 37 classes. Almost certainly he will divide the 40-period week by 9 in order to obtain 41 classes at 4.4 periods a week (average). And indeed a danger may be, if he is inordinately sensitive to pressures, that he will cut up the week even more finely, in order to obtain 45 classes with an *average* of only 4 periods each. Another danger is that of straining after further classes by giving the teachers less than the 5.5 'free' periods to which their allocation has been graded off in this exercise. To anyone versed in the mechanics of school organisation the lesson of the table above is that the strictures of the small comprehensive school tend to be transferred to the shoulders of the pupils and sometimes the teachers. At worst it can become a 'cram' school, with the pupils struggling with too many subjects and the teachers getting too little time to supervise their efforts. This through attempting to emulate larger schools that are able more easily to diversify courses—not, however, in any spirit of keeping up with the Joneses, but rather because society today is so mobile, that the pupils of both schools aspire to the same kinds of careers, in much the same places.

To put forward a Form 4 curriculum for a 3 fe school, in order to compare it with the one already done for the 6 fe school, it would be unrealistic to preserve the same basis of a 5-period average per class. It will be nearer the mark if we reduce the average to 4.4 periods, that will give a total of 41 classes; from these we must deduct the 3 class-equivalents devoted to minority-time subjects, so that our comparison is between the 55-class budget already discussed for the 6 fe school, and a budget of 38 classes for the 3 fe school. True we are comparing like with unlike; but this does not matter so long as we keep in mind that we are doing so, and remember the reason why, which is that our 3 fe school has reduced its 'portion' in order to put on a 'menu' that is almost as interesting as that of the 6 fe school. On such a 'menu' he might offer 14 O-level subjects as follows: English, French, Latin, Scripture, history, geography, maths, physics, chemistry, biology, art, and needlework, and for CSE: English, history, shorthand, typing and office practice, maths, physics, biology, art and design, wood, metal, technical drawing, cookery and needlework.

It is surprising how adaptable the curricular mechanism is, and how widely and effectively this quality is exploited, so as to enable small schools to keep up with their larger neighbours. To keep up with them, at any rate, on a level determined by the counting of subjects. But on the deeper level, of what goes on in the classroom, it is to be

deduced that our present headmaster gave a start in Form 1 to French with a class of just over 30; and that his later introduction of Scripture —most likely in Form 4—was almost certainly an escape route for about half these pupils, who had fallen by the wayside in French. The chemistry class in Form 4 (and 5) is probably setted against geography 'O'-level and some other subject (CSE); one wonders how the small size of the chemistry class affects the numbers, and the ability range, in the geography and the other subject class. Even more acute side-effects may be expected to result from the Latin and music classes, which are probably much smaller than the one in chemistry. Latin in Form 3 was a charge on the 'special allowance' (13 periods) made to this form (over and above Form 2) in order to give a reasonably early start in the schools to three subjects. As for the remaining two classes, one can imagine the strength of the bid made for them by the physics and chemistry teachers, who want to separate out in Form 3 the 15 or so pupils who can manage these O-level courses; and if they win, what then are the chances of some other pupils in Form 3 whose hands are itching for a wider experience of the crafts? Moreover these pupils, all of them, are the ones for whom over half their classes have been reduced to 4 periods a week. The 3 fe school can put a good face on it by exploiting the flexibility of the curricular mechanism; and it can impress those who are bent on the counting of subjects. The frustration of pupils, however, is by no means so easily measured.

The 3 fe school is able also to keep pace in Form 6 with the 6 fe school, in all except A-level German; its curriculum being this one, which allows 20 periods for minority-time studies:

Subjects	*Pupils*		*Periods per week*		
	1st Yr.	2nd Yr.	1st Yr.	(1st + 2nd Yrs.)	2nd Yr.
English	10	9	7	(0)	7
French	5	6	2	(5)	2
Latin	3	2	2	(5)	2
History	7	6	3	(4)	3
Geography	5	5	3	(4)	3
Art	3	2	2	(5)	2
Music	2	2	2	(5)	2
P. Maths	6	5	2	(5)	2
A. Maths	6	5	2	(5)	2
Physics	6	6	3	(4)	3
Chemistry	5	5	3	(4)	3
Biology	4	5	2	(5)	2
	62	58	33	(51)	33

The staffing cost of running this Form 6 works out to just under 4 teachers. This is worth saying because so many people make out that the whole question of the small school turns on the uneconomic character of sixth-form provision; this perhaps without realising that to centralise this stage of provision means putting buses on the road that might just as well also pick up the pupils aged 13–16 and so bring about a real staff saving. The argument against the small sixth form is more concerned with the frustration of pupils than it is with economics. What kind of experience will it be for them to turn up in such very small classes as those in many subjects shown above? What

opportunity is there for keen and critical discussion? Will there be up-to-date books in the subject library? How long is the teacher likely to stay if he finds himself having to teach well outside his specialism and to all abilities of pupil? These are some of the things that happen to a comprehensive school when it falls well below 6 fe. The fact that they are not easy to measure should not lead us to minimise their importance to the child. From his standpoint, whether he is in a 3 fe school or a 15 fe school, there is not much to choose between one kind of frustration and another. Better for him if we keep reasonably to the middle of the road.

What are the difficulties faced by a rural education authority in organising secondary education. This article examines the way these problems are coped with in one area.

The Small Comprehensive School—Westmorland

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Westmorland is a small rural education authority with something over 4,500 pupils in its secondary schools. In 1947 when it submitted its development plan, its secondary provision consisted of eight grammar schools with two senior schools both in Kendal while most of its primary schools were all age. The plan envisaged the creation of multilateral or comprehensive schools but this was not accepted by the Ministry of Education except in the most sparsely populated areas, and in the next 20 years four secondary modern schools were built, three in Kendal and one at Milnthorpe. Meanwhile, however, three comprehensive schools had been established and now slightly more than one third of the secondary school population is educated in these schools. Two of them, Appleby Grammar School and Kirkby Stephen Grammar School, keep the names of the older foundations with which they were merged; the other, the Lakes School, came into existence in 1965 when one boys' bi-lateral, one mixed grammar school and one girls' modern school were closed. At the start of the academic year in September 1970, they had respectively 467, 370, and 712 pupils on roll out of a total secondary population of 4,547.

Are these schools viable and on what criteria is one to base a judgment? One can suppose that the kind of problem they throw up is not peculiar to Westmorland although it is largely determined by its geographical background. The two schools in the north east of the county, Appleby and Kikby Stephen, 10 miles apart, are cut off from Kendal and the south by some 25 miles of hilly country with difficult communications in winter; they each have a wide catchment area but perhaps in retrospect one may wonder why the opportunity was not taken to concentrate all the secondary pupils in this area in one school of some 840. Transport difficulties at that time and local pride will have had much to do with this. At least it must be admitted that each is more viable than the two one form entry schools that they replaced (boys at Appleby, girls at Kirkby Stephen). The other comprehensive school, the Lakes, 10 miles to the north west of Kendal, does not present such extreme problems with its 712 pupils, but certain limitations in its organisation are nevertheless apparent.

Each school contains a wide spread of ability and a range of background, from the professional families with a long record of educational interest to the lonely hill farmers whose children possess a sturdy independence coupled sometimes with cultural deprivation. The schools have inherited a tradition of sending a steady entry to the university and to some extent are judged in the local community by their capacity to maintain this. But there is a growing realisation of the diversity of the needs of their varied intake and in the schools a professional awareness of the challenges involved.

Table I gives an indication of some of the fundamental factors of size—

Table I School Sizes

	School 1	School 2	School 3
Number on roll	467	370	712
Number in sixth form	30	44	88
Teaching groups in first year	5	3	5
Number of staff (full time equivalent) including H.M.	29	25.5	38.2
Staffing ratio	16.1	14.5	18.6

The schools show remarkable differences in their character and organisation, and the education authority treats as sympathetically as it can requests for staff that a headmaster considers desirable to implement his particular policy. In the first year, each school makes special provision for its more backward pupils but there is no uniform policy over streaming. By the second year however all the schools stream with the introduction or continuation of French as the distinctive feature of the top one or two streams. Only the largest school can offer German or Latin at this stage; the other two provide Latin but not German as a fourth year option.

Table II Second Year Curriculum (examples of one top and one lower stream. N.B. One example refers to a 35 period week, the other to a 40 period week).

	Top stream	Lower stream
Religious Education	1	2
English	4	8
History	2	3
Geography	2	3
French	5	—
German or Latin	4	—
Mathematics	5	5
General Science	3	2
Rural Science	—	4
Art	2	2
Music	2	3
Woodwork or Needlecraft	2	2
Metalwork or Housecraft	—	2
Physical Education	3	4
	—	—
	35	40

By the fourth year, the organisation in effect divides those who expect to stay on for a fifth year from those who will leave. Thus provision is made for a Newsom type course in the fourth year but those who stay after this will join an examination group and are expected to take some CSE subjects at least. As far as possible, entry for CSE and GCE at 'O' level is flexible and pupils can mix their diet but this to some extent depends upon examination syllabuses, teachers' skills and inclinations, and the extent of setting. At this stage, the staffing ratio becomes much more important; as in the second year streaming may give an impression of coherent form units but the ability spread within such units is still very wide and makes demands on the teacher even in the greater number of sets that can be organised in the fourth and fifth years. The physical attractions of the area may help to explain why there is no undue difficulty in obtaining staff. Teaching groups vary in size, with a few over 30, the majority 20 to 30, but with some small and one might say uneconomic sets, e.g. two pupils for Latin, two for music, five for metalwork, six for woodwork, six for needlecraft. A few surprisingly

small classes (nine for biology, 10 for history, nine for French, eight for art) can be explained as extra groups put in to options to give a wider choice.

Table III Fourth Year Curriculum (Two examples of examination groups and one of a Newsom group 35 and 40 period weeks.)

C.S.E. and G.C.E.

Example 1		Example 2	
Religious Education	1		1
English	6		4
Mathematics	6		5
Physical Education	3		3
French or Rural Studies or Art	5	French	5
		History or Physics or Woodwork or Housecraft	3
History or Commerce	4	General Science or Biology	3
Latin or Geography (plus extra music & P.E.)	5	Chemistry or Art or Religious Education	3
Two of Woodwork, Science, Metalwork, Housecraft	10	Geography or Music or Metalwork or Housecraft	3
		German or Latin or Technical Drawing or Needlework	4/5
		Drama alternating with Music	1
	40		35

Newsom Group

Religious Education	1
English	6
Mathematics	5
Physical Education	4
Civics	2
Local Studies	3
Music	2
General Science	3
General	1
Library	1
Outdoor activities	4
Art or Rural Studies	2
Boys' or Girls' Crafts	6
	40

Example 1 shows the real difficulty experienced by a small school in trying to give a balanced curriculum while still affording some choice; example 2 shows how larger numbers combined with skilful time-tabling can allow some degree of flexibility. The percentages staying on for a fifth year at the three schools in 1970 ranged from 64% to 77%; it is interesting to speculate whether these would rise if a fifth year Newsom course were available.

Entry into the sixth forms depends upon no formal qualification and in one school is open to any sixth year pupil moving up from the fifth year. But most students have a minimum of four GCE 'O' levels. All the schools offer traditional 'A' level fare with a sprinkling of minority time studies and 'O' level resits; one has a commercial course, but it has not been possible as yet to develop courses of more general education

for which the demand does not appear to be pronounced. Every effort is made to allow a free choice of subject but this is not always possible. The subjects taken at 'A' level at all three schools include English, French, history, geography, mathematics, physics, chemistry, biology, woodwork, housecraft and art; one school also has students taking religious education, Latin, German, music and technical drawing, while another offers geology. Numbers in teaching groups vary from year to year, the largest this year being 14 in one mathematics group, but they are often very small. This year only geography, mathematics, chemistry and art have groups of three or more in both first and second year sixth forms in all three schools, and of these the chemistry classes of two schools are taught together. The more usual subjects and combinations are clearly available and entries to universities (13 in 1970) and to colleges of education and further education (44) indicate that students do not suffer in competition with others. It is perhaps true that the pace in the more academic forms up to 'O'-level is not as fast as it would be in a more selective situation and that the limited ability of some pupils has persuaded teachers to adopt a more forceful attitude to teaching to the examination than they might otherwise support. The opportunity has therefore to be taken in the sixth form to encourage a more scholarly approach. But there is no doubt that the limitations for the study of economics, modern and classical languages, technical and craft subjects are unfortunate. There is no easy solution; links with the College of Further Education in Kendal are not a practical geographical proposition, while a sixth form college with boarding facilities might offer a wider curriculum more economically but at the cost of even smaller first to fifth year schools with fewer attractions for teaching staff.

As social units, the schools are undoubtedly successful. No attempt has been made to analyse the number and variety of clubs and activities that are available to the pupils but visits confirm the impression that although some are ephemeral they are well attended and fulfil a real need. Moreover, the support of parents and the neighbourhood in general can be seen in the ability of these small schools to raise money for minibuses and swimming pools which are sometimes used on a community basis. Physical activities are popular—the usual team games, ponytrekking, fell walking, canoeing, camping, the Duke of Edinburgh's award—with drama and music clubs, chess, photography, electronics, clubs for the juniors, social service clubs—all have have their supporters. Transport can be a problem and hence the desirability of owning minibuses, but some activities take place in the dinner hour, and most pupils can stay after school for something they really want to attend. In the last resort, staff take pupils home by car.

Ideally one might not choose to set up a three or four form entry comprehensive school, but in the rural county of Westmorland they exist and fulfil an educational and social purpose. The cost in terms of staffing deployment and limits on pupils' curricular choice is considerable; against this must be set the advantage which comes when children remain near their own houses where their school has a strong influence and where their teachers know them well and care for them. The pastoral role of the school is accepted as a natural part of its function and no elaborate forms of guidance need to be superimposed on the more traditional teacher-pupil relationship; this at its best is developed in a warm and friendly atmosphere.

Courses linking schools and further education colleges have been developed in some areas. They may be a growing point when the leaving age is raised.

School—College Courses

SYBIL BROWN

Sybil Brown is Further Education Information Officer at the Department of Education and Science

The raising of the school leaving age to 16 in 1972 will provide children with the opportunity to approach the problems of career and job exploration in a realistic context. The Schools Council is sponsoring a development project of careers work in secondary schools, emphasising that careers education is a continuing process starting at the age of 13. Curricular developments are taking place in other and more traditional school subjects to introduce the school leaver to the social and economic environment he will face outside the school gates.

In this context, the 'linked' course—whereby pupils from school attend a college of further education for part of the day or week—can provide a valuable introduction to both career choice and the world beyond school. It was estimated that in February 1969 nearly 14,000 pupils were attending colleges of further education on linked courses for periods of from half a day to one whole day. Small beginnings, but developments since then have included an extension of the period of release—up to 2½ days a week in the case of some schools in County Durham—and the extension of the scheme itself to other areas.

Vocational and non-vocational

A majority of linked courses have a vocational flavour, though they do not attempt to prepare boys and girls to become, say, electrical fitters or shorthand typists. The courses introduce vocational knowledge, techniques and skills within the context of continuing general education. Students gain some idea of what certain occupations are like and 'sample' the type of course they might follow in those occupations. There are also the benefits of experiencing the atmosphere of a college while following a course which looks beyond the school.

Not all linked courses are vocationally orientated; some science students for example use college laboratory facilities as part of a GCE or CSE course. In Weymouth fifty grammar school boys attend college for their 'A' level physics course on a regular basis. In County Durham a comprehensive scheme of linked courses allows non-academic students to experience a wide range of studies, including industrial archaeology, community studies, puppet drama, and everyday science, alongside more vocational subjects such as engineering science, construction and decorating, catering, languages, and motor vehicle craft studies. Linked courses in computer appreciation have become established in some parts of the country: in Warley pupils from first and second forms of a grammar school visit the college to run computer programmes and learn what computers can and cannot do; fourth and sixth formers attend courses in analogue computing. Linked courses can offer possibilities for children of all abilities. Two Kent ESN boys gained their CSE in building craft work through a

linked course with a college of further education. In Northumberland a group of educationally sub-normal boys have been learning about the sort of jobs they might do in an engineering workshop by helping fourth year apprentices at a college of further education—a situation which has had benefits for both the schoolboys and the apprentices who have taken their responsibilities seriously.

Linked Courses in Kent

There are reports of thriving linked courses in various parts of the country but certain factors are emphasised: these courses depend for their success on support by the LEA and enthusiasm on the part of school and college staff. Kent has been fortunate in both respects and the last five years have seen the development of certain linked courses examined as CSE subjects. A closer look at this development indicates some of the problems which have to be faced and solved in what is, in effect, a joint school/college venture.

The Kent 'linked courses' started many years ago and in 1967 schools began to submit proposals to the South East Regional Examinations Board for the examination of some of these courses under Mode 3. Recently the Board has encouraged schools and colleges to coordinate their courses in order to ease the problems of examination and moderation.

CSE Mode 3

Forty Kent schools and seven colleges of further education are offering one and two year 'linked courses' which are now being examined under Mode 3. In all some 350-400 boys and girls attend college for one day each week to take what might be described as 'non-school subjects'—i.e. those for which schools do not have the facilities or experience. At present, nine subjects are offered and examined on this basis, and include automobile engineering, various building and construction craft work, catering, computer appreciation, mechanical, electrical and electronic engineering crafts.

The official request for a linked course to be examined under Mode 3 must come from the school concerned, together with the proposed syllabus and sample question paper. In many cases the college concerned (and most college staff have valuable experience in producing course syllabuses for submission to joint committees) produces the syllabus and sample paper for the school to modify before submission. But even before this stage much depends on the close informal contacts between staff in the school and the college: mostly the scheme will be a joint effort. Sometimes, ideas for linked courses have sprung from the 15 year olds themselves, as they see their friends who had left school taking 'different' subjects in that 'different' place known as college.

'Joint effort' is now the keynote of these linked CSE courses. Co-operation is not simply between one school and one college; three or four schools may need to link with a college; two or three colleges offering similar subjects may want to bring these together as one subject for the purposes of examination. Much depends on the goodwill and enthusiasm of the school and college staff, not only to operate what can be a complication to an otherwise straightforward school or college system but to educate in the fullest sense the young people in their charge.

Pastoral care may often seem to take different forms in colleges and,

schools. This does not mean that college staff 'don't care'—but that the atmosphere of a further education college which tends to be more free, less restrictive than that of the schools, calls for a different approach. A 15 year old attending college on a CSE linked course is addressed as 'Miss ——' or 'Mr ——'; there is no uniform, no morning assembly, no prefect or house system. Students have their midday meal from the college canteen, with breaks for morning coffee instead of school milk.

This freedom has two sides: on the one hand it can encourage independence; on the other, there is more chance that welfare problems can go undetected unless college staff are aware of the difficulties the 15-16 year olds may have in adjusting to the new life style. The school retains responsibility for its pupils during these linked courses, but in practice it is the college staff who are on the spot should problems arise.

Experience in Kent has shown the need for constant liaison between staff in schools and colleges. In West Kent, a lecturer from the college acts as liaison officer between the schools, the CSE Board, and college staff; in other parts of the country teachers from schools visit the colleges to monitor progress and maintain contact between this part of the curriculum and that carried out in the schools. In apparently minor ways, too, this contact is important for the colleges: the schools receive the CSE examination results to pass on to the successful candidates—but more than one school has on occasion forgotten to tell the college the results!

The number of school children taking a Mode 3 CSE linked course in a particular subject at a college ranges from less than 6 to nearly 40. Initial selection for the courses is managed by the schools, in consultation with parents, the college, and the children themselves. Not all children attending the course will enter for the examination, and some form of selection is needed—again, operated jointly by school and college. College staff have been known to remonstrate when they find that some of the weaker students need straightforward 'reading and writing' tuition in addition to the CSE course work. With an ability range from the 15 year old 'Newsom' child to the rising 16 year old who may also be taking GCE 'O' levels—some of these are also in courses linked with the colleges—these linked courses may also have some relevance to the 16+ boys and girls staying on at school for a further year.

Timetabling

A problem that both colleges and schools have to face is time-tabling: one day from the school week being set aside for the linked course. This is complicated for the colleges if a number of schools in an area are using the same college on the same day for a particular subject. Where, as is usual, the school children form a large enough group, the college arranges the course as a special class; otherwise school children may join for part of the time groups of young employees on day release. This mixture of young people—some still at school, others at work—can, like the freedom of the college style, bring both benefits and problems.

A particular headache for the CSE Board in examining these linked courses appears in the form of assessment and moderation. Continuous assessment is a valuable technique for monitoring students' progress; but assessment and moderation by college staff who may not be trained

and experienced in CSE work, makes additional demands on the Board, its moderators and examiners. The South-East Regional Examinations Board is aware of these problems, and encourages college staff involved in CSE examined linked courses to take part in training courses and conferences.

Vocational 'rights' and 'wrongs'

The vocational aspect of linked courses raises doubts in some minds, joy in others. The success of linked courses generally is often judged by the number of 'right' choices made by the pupils concerned: a boy who wants to go into the building industry and takes a linked course finds that he likes the work—to many that is a 'right' choice and a successful course. But a wrong choice is in some measure also a sign of success: a girl decides to do catering only to find that she is using mechanical mixers on a massive scale instead of the dainty 'cordon bleu' work she expected. The disillusionment may cause her to change her mind about catering as a career; the linked course may have succeeded if it has helped her to find out in time.

Very many further education courses are vocationally orientated, and at first sight there may be some similarity between a linked course in mechanical engineering crafts and a City and Guilds of London Institute craft certificate course. This surely prompts some consideration of the relationship of a linked course in a 'vocational' subject to the next—or first—stage of further education and industrial training. Should the linked course provide a broad introduction to a subject, should it provide a bridge between the school classroom approach to a subject and the practical 'on the job' approach?

Schools, colleges of further education, and the careers service are all concerned to ensure that the square peg finds a square hole in terms of occupation, job satisfaction and career opportunities. Linked courses which offer opportunities for vocational exploration have an important part to play in curricular developments in secondary schools. The raising of the school leaving age may multiply these links between schools and colleges, but any scheme which allows schools to take an active part in preparing their pupils for the next stage in life, be it a job, or further education or a mixture of the two, deserves serious consideration.

How do young children learn, and what are the implications for those who teach them?

Educational Needs of Young Children

DOROTHY GARDNER

Dorothy Gardner, who has now retired, was formerly head of the department of child development at the London Institute of Education.

There was probably never a time when young children's education was not exposed to dangers arising from the enthusiasms of adults, ignorant of the nature of children, together with the almost fatal powers of adaptability of the young child and his intense desire to please his teachers. Extraordinary 'snippets' of information were imposed upon them and they were trained to perform strange skills with apparent success and only later teachers came to realise that the new devices had resulted in making children confused or apathetic. Sensitive teachers then discarded them, but by that time damage had been done to the child's zest for learning.

Many such mistakes can be avoided if we are prepared to review what we now really know about the ways young children learn and firmly refuse to be cajoled or stampeded into anything which cuts across or disregards these.

There is of course much about young children which we still need to learn by patient observation and open minded research which applies the proper safeguards to ensure reliability and above all takes account of long term, not merely immediate, effects of 'educational' devices used with young children.

There is however some accumulated evidence on which we can rely. It is well that in these days when new ideas about structured learning programmes and educational technology challenge our concepts and practices and when enthusiasms for particular types of organisation and buildings are so great that some people imagine that they are enough in themselves to ensure good education, that we take account of the principles and practices which ought to be safeguarded at all costs whatever fashionable climates of opinion arise in relation to specific issues.

The Teacher and the Child

No-one who has studied young children can have serious doubt that bodily health and emotional security are necessary before anything like optimal learning will take place. It is also true that children cannot be really happy unless their intellectual needs are met. We know how rapidly young children will manage to forget things which were apparently 'learnt' under strain and anxiety and how eagerly they retain and use knowledge which came to them as solutions to their own problems or aids to the carrying out of their own purposes. Moreover we know how very well babies and young children learn when the environment is favourable and that what constitutes a 'favourable' environment for the young child depends very greatly on people and personal relationships. The parent who has time to enjoy the child's learning, rejoice in his acquisition of skill and contribute the right help at the right time is of vital importance.

No-one who observes a baby can be unaware for long that he is full of zest for exploration of the world in which he finds himself, nor that a most important aspect of that world is the people who care for him. A baby quickly becomes apathetic and depressed if these people are constantly changing so that he cannot establish a real relationship with them, whereas the delight of loved people in his progress act as the strongest possible stimulus to further effort and this continues to be so throughout early childhood.

Let us therefore watch very carefully that no form of organisation, however attractive it may seem, is allowed to come between the young child and the teachers who really know him and are known by him. To be able to find his teacher quickly, when he wants her, to know that she is watching his progress and is pleased by his success, matters more to a young child than any building, however beautiful. Moreover while some new and stimulating materials will encourage the child to explore, *too* great a range of these may bewilder rather than inspire him. Experiences gradually introduced to children by their teacher are eagerly seized upon, but without help, children often fail to realise the possibilities of using the material in relation to their purposes.

Most of us have witnessed the purposeless wandering and ultimate irritability of young children when they feel they are achieving nothing and that no-one cares what they do.

Infant school teachers should view with caution, where young children are concerned, such devices as teaching machines, team teaching and very large 'open plan' schools. To overflow from the classroom into wider spaces is welcomed at times by all children, but the younger they are the less far away will they want to be for long from their own teacher.

A mother once said to her children, '*Why*, when you have the whole beach to play on do you have to come and sit down upon me?' The answer to that question lies deep in the nature of the young child! He is willing to explore only if he knows he can come back.

Perhaps the most spectacular learning of young children is the acquisition, often at a very early age, of the power to understand and express themselves in what was at first to them a 'foreign' language. If we examine the conditions under which children have done well we always find that they included close contacts with people who wanted to listen to them and to talk with them. Let no-one try to persuade the infant school teacher that she is not indispensable or that an electronic teacher can do better than she can!

To listen is to allow the child to learn by exploration and experiment and to reward his efforts by our understanding and sympathy. To respond to him in our own words is to open up fresh horizons which he will explore and so add to his achievements. The delicate balance between helping the child to make his own discoveries and supporting him in his quest in ways which help him to make more discoveries lies at the heart of successful 'progressive' education and is fully in line with the young child's natural ways of learning. No teacher who has known the enthusiasm and vigorous thought of young children when taught in this way, could feel other than impatient at suggestions that they should go *back* (under other names but in fact like much older methods) to teaching children to memorise facts or perform

skills which as yet mean nothing to them, from the motives of winning external rewards or avoiding blame or punishment.

Individual Teaching

Another direction in which our knowledge is firmly established now is in our awareness of the great differences between child and child, so that we can never again be satisfied that we can do the best for children without a great deal of individual teaching; and although small groups may usefully work together at times, they need to be carefully selected and not held together for too long. Teaching of whole classes simultaneously will not be a satisfactory way of imparting knowledge or skill though it is possible to present material for enjoyment, such as music and literature, to larger groups of children fairly near in chronological age, since these may be enjoyed by all the children in different ways. Even there however we need to take account of how rapidly children are developing in the infant school years and we should not expect seven year olds to be limited entirely to stories which will appeal to five year olds nor subject the younger children to boredom by presenting material too far above their powers of comprehension. Here too an individualised approach is necessary especially in 'family grouped' classes.

Another matter in which studies of children in and out of the family setting confirm and do not contradict our knowledge is that the family is of such importance to young children that they will embrace school life more eagerly if there are links made between home and school and if a child feels his teachers and parents are friends with each other as well as with him, he can abandon himself to the pleasures and accept the standards of school life with greater security. He is not in the throes of conflicting loyalties and both teachers and parents can extend his educational opportunities if they understand and respect what he is gaining from the other. The infant school, like the nursery school, should be an extension of the home rather than quite a different world.

From clinical and other research evidence has steadily accumulated of the great importance of the earliest years in the establishment of mental and physical health and of attitude to life. The years under five are firmly established as the most critical period, with the years between five and eight following close upon them. Not only do we now know that we have laid sound foundations for character if we can guide children successfully through the early years of education, help them to cope with the problems of social relations with other children, to deal satisfactorily with feelings of jealousy and envy and to believe in themselves as people who can both win and give love, but also that we can most surely lay sound foundations for successful later education and ultimately coping with the many problems of a complex adult world.

The Basis of True Learning

To keep alive a zest for learning and joy in mastering difficulties is easiest to achieve when there is no damage arising in the first seven years. Evidence from longitudinal research is making it clear that in the development of intelligence itself, the early years are again the most vital. It has been found that when changes in intelligence take place about 50% of them appear to occur under the age of four years and a further 30 per cent between the ages of four and eight. After

that changes occur much less rapidly, only 20% of them between the ages of eight and eighteen. The work of nursery and infant school teachers is therefore of the greatest possible importance for our future. It is by no means easy to watch the thinking of young children and to know how and when we can best help them in their quest to understand and solve the problems presented by so many aspects of the world around them or in their task of sorting out the complexities of personal and social relationships, especially with other young children. It is hard to escape the conclusion that however good the physical care and kindness which children may receive from untrained or partially trained helpers, we ought to regard it as a 'must' that every group of young children should have easy access to at least one fully trained teacher.

Good child care may indeed prevent harm to young children arising from distressing or deprived home conditions, but the young child is unlikely to achieve his full educational potential without the help of someone who has undergone a rigorous training for the education of young children. We cannot afford to economise on our youngest children.

Benjamin Bloom reporting on the results of longitudinal studies, together with those made with identical twins, writes, 'The evidence so far available suggests that extreme environments may be described as "abundant" or "deprived" for the development of intelligence in terms of the opportunities for learning verbal language behaviour, opportunities for direct as well as vicarious experience with a complex world, encouragement of problem solving and independent thinking and the type of expectations and motivations for intellectual growth.'

To offer all these alone requires great skill and deep understanding from teachers of young children if they are to be provided in a way which will vitalise and not deaden the intellectual enthusiasm of the child and without the teacher they may be forgotten altogether!

It is important that teachers should fully understand the sequences in development of young children which, if respected, make for a much greater reward in the after effects of the education we give them. Without such knowledge teachers may be tempted to use devices aimed at getting an apparent sophistication rather than true understanding. The child naturally passes from first hand experience to the use of symbols, experiment should precede demonstration, fluent speech needs to come before reading and writing, and generalisations are not really understood except through the accumulation of particular experiences. If we can be content to wait for and work alongside the child's sequences we will achieve genuine learning and understanding and will be eager to venture further.

Many teachers now are able to respect the tremendous educational values of play and to use the way of discovery in the teaching of mathematics, but too often there is over pressure about early reading and the warning of the Plowden Report that excessive writing can be the enemy of spoken language is needed today.

As long ago as 1936 Susan Isaacs wrote the following passage and probably more teachers are now ready to be guided by it than was then the case.

> We teach reading and writing and the formal arts far too early, substituting sterile attempts to compose with the pen for living

communication by word of mouth. The time that is spent in formal work on the three Rs would be far better employed in allowing the children to pursue the activities they so much seek connected with the business of living—washing, cooking, cleaning, searching out facts about the way the home is kept going and the life of the town maintained. The ordinary child of five to nine years of age is civically minded in the sense that he is interested in all those activities of the home and the town (or the country), the subject-matter of the social and physical sciences: physics, chemistry, geography, economics, etc. These activities are the natural starting point for his education, and today the school deliberately deadens his interest in these things and idolatrizes the formal tools of learning. It is little wonder that children of the school leaving age cease to take any interest in geography, economics, literature, social administration, etc. There is an extraordinary disproportion between the time and trouble put into teaching children to read and write at far too early an age and our concern with the real use of these things to serve personal and social life. . . . It is in the Infant and Junior School that we begin to go wrong so disastrously, and we can never retrieve the mistakes we make at that critical period by even the most skilful teaching in the adolescent years.

The First Year in School

In this connection it is particularly important to remember the five year olds who suffered most of all under the older regime. The first year in school for many children is, therefore, particularly significant in forming their attitudes towards learning. They have not yet passed far beyond the attitudes and interests of early childhood and education of an upper nursery school type would suit them well. If they are taught in classes of children aged 5 to 7+ there will be a tendency for them to feel that they should aspire to the standards of the older children and compete with them for the teacher's attention. Unless the teacher is alerted to this danger and is prepared to give time and thought to the development of five year old interests and purposes the first damage may be inflicted upon the child's genuine zest for learning.

Though it is of course never possible to generalise too rigidly in terms of chronological age there is a tendency for most six year olds to make certain rather rapid advances into the world of middle childhood. They will tend to be more forthright than the five year olds about expressing their wishes and demanding attention from the teacher, and though their chief concern is with contemporaries they have perhaps more in common with the seven year olds than with children younger than themselves, since they are rather firmly trying to 'put away childish things'. They may attempt at times to 'mother' younger children but may also overwhelm them unless the teacher is on the alert.

Five year olds do not develop best by having their problems too quickly solved for them by older children and are themselves capable of making discoveries and of helping each other. Their play life is particularly rich in educational possibilities. Their interests tend to be both constructive and imaginative and much concerned with the world around them. They are half way to appreciating the difference between fact and fantasy, but are often satisfied with symbolic representations of reality. Much good thinking and reasoning goes on in their imaginative play if we have time to study and enter into it. They may not as yet feel the need for reading. Most six year olds are consciously eager to

acquire the skills we have and also may have a real desire for the knowledge that comes from books. They are more firmly planted in the world of external reality and have made big advances in reciprocity with their contemporaries. They will listen to each other and group discussions become increasingly valuable. Five year olds would on the whole rather tell the teacher of their discoveries, and though they can make good contacts with other children in specific situations, they are not normally very interested in class or group discussions. Too often in the past their time has been wasted by attempts to teach too early skills for which they saw no purpose.

To exploit or to neglect this age group is to build education on a poor foundation. Before we decide that half a day in school is enough for them or that they should not enter school till the September following the fifth birthday we should ask ourselves what effects these things will have on their all important play life and whether the alternatives open to them will be anything like as favourable as being in a good infant school under the care of enlightened and well trained teachers.

Are primary school children subject to a rhythm of fatigue which should determine the arrangement of the day's work? British and Belgian attitudes offer provocative contrasts.

Primary School Curriculum—Education in Belgium

E. W. FREETH

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During the Easter holiday 1970 the Belgian government organised a *semaine pedagogique* on the primary school curriculum to which a British delegation was invited. Some 1,500 teachers attended at three centres, including Brussels, and listened to lectures given by district inspectors of the Ministry of Education and French Culture, introduced by the Inspector General. The curriculum was discussed thoroughly with special attention to lesson fatigue, the division of time between subjects, and the need for school participation during that part of the day during which the child is not at school. As will be seen, the terms of reference were quite specific; guidance as to how the teachers were to allocate that scarce educational resource, time, to the satisfaction of themselves, the parents, and the Ministry.

The time of the conference was divided into four daily meetings to consider:

a. The fact that fatigue occurred in children according to well known rhythms, by day, week and term.

b. The need for fundamental subjects to be tackled during periods when fatigue was at a minimum.

c. The partition of the remaining time between the other academic subjects and physical education.

d. The amount and type of learning which went on at home, other than normal fundamental subject homework, that is incidentally through the medium of television and other mass media.

For teachers from Britain, such a division of the programme of the conference was surprising. Our emphasis during the last decade or two in Britain has been so much on freedom of study in the primary school that this programme inevitably seemed to assume a somewhat regimented curriculum.

Fatigue and its Effect

The Belgian Ministry suggested to the assembly that an important factor which needed to be considered at all times as being of paramount importance was an accurate understanding of the fatigue quotient of each hour of the day, commencing with the period immediately after the arrival of the children at school in the morning, and then by day, week and finally term. The depth of treatment was such that degrees of fatigue needed to be illustrated on a large screen in colours which ranged from deep brown, for the highest fatigue levels, to pale yellow, the most propitious moments for learning. These periods took into account the journey to school, the time of

the morning or the afternoon, as well as the sequence of lessons.

After the choice of times for the day's work, sequence appeared to be of the next greatest importance, i.e. the desirability of arranging certain learning activities in a well-tried order. This came, in the end, to mathematics, followed by French (or Dutch as the case might be), followed by what was interestingly termed *'l'eveil'*—the awakening. This 'awakening' may be thought of in British schools as the exploration of experience subjects, an introduction to the world around the child through personal experience or by the vicarious experience of the teacher.

As I listened I could not help wondering whether a time-table maker, with all today's pressures on educational time, would in practice be able to follow the suggestions as to best use of fatigue-free periods for privileged subjects. I have discovered here in Greater London that with limited large hall accommodation even ordinary physical education lessons, apparatus work and movement, have to be spaced throughout the day in order to fit the whole school into one hall. According to the speaker, the half hour which follows an energetic physical education lesson is more or less useless for any requirement of intense study, such as that needed for the fundamental subjects. Furthermore, if consideration is to be given to the needs of periods during which television lessons can be taken, and/or music lessons with the aid of the one school piano, then what happens to the fatigue oriented time-table?

It did not take long for the questions to be put and for the ready answer to emerge. This was, to make the most of the extra morning provided by the six day week which at present operates in Belgium. Its special value lay in the fact that it contains low fatigue periods during which time the important fundamental subjects could be studied. Of equal importance was the fact, according to the speaker, that a Thursday morning following an afternoon off was more useful than it would otherwise be, due to the low fatigue quotient. The reasoning was excellent, but its realism was put in doubt by the fact that during question time the teachers reiterated their desire for the five day week. Furthermore one felt that they wished the school day to be freer and more flexible whatever the Ministry's case for an ordered and sequential pattern, based on lesson fatigue and the other factors introduced by the speaker. It was notable that the Inspector General took over the answering of questions on this occasion.

Structure of the Time-table

A great deal was made of the theory of *tiers temps*. This divided available teaching time into one half for the fundamental subjects, one quarter for all the subjects of *'l'eveil'* and one quarter for physical education. In our own schools we are aware that a traditional line exists, which, in the back of the headteacher's mind, pays regard to the need for fundamental knowledge to be acquired by the pupil up to a minimum level. Number, and the use of English, in reading, speaking, writing, and the seeking after knowledge by the use of reference books and other specialised sources, have pride of place in many timetables. But such rigid limits as were suggested by the Belgian Ministry of Education would shake even the most diehard of British educationists. As I listened to this particular speaker, I could not avoid getting the impression that primary school in Belgium might

not be as exciting and all embracing a place as its British counterpart. That the Ministry should be concerned with what is, in Britain, the right of the headteacher to structure his day and week, according to the need of the school, entirely dependent upon the situation as it exists in that school, caused the British delegation some head shaking. During the address on *'l'eveil'*—the awakening period—an attempt was made to increase the importance of this part of the timetable, by first belittling it. It was described as 'these little branches of study', and the question was asked—was their place in the timetable justified, taking into consideration the amount of knowledge that a child could acquire from them and the degree of stimulation brought about for further study? Their place was then more than justified by a detailed exposition as to how these subjects and it did come down to subjects, should be treated in the *maternelle*, lower primary, middle primary and upper primary grades. The greatest amount of time for *'l'eveil'* was allocated in practice to the middle primary stage, and a demand made by the speaker for more time in the upper primary led one to believe that pressures of the fundamental subjects, at that age level were intense. The subjects mentioned in this *exposé* were, firstly history, then geography, followed by singing, handwork, drawing and physical education.

At the end of this lecture it was asserted that the awakening of interest in the mind of the child needs to be more than just introduced. Every effort must be made to ensure that this newly aroused interest is sustained and a will to continue it is created. A questioner from the hall, provoked by the speaker having suggested how long the periods should be for each subject, asked how an art lesson could be expected to fit into forty minutes. He was answered in the simplest of terms—that with careful planning, and with an art lesson only once in two weeks, a period of one hour and twenty minutes would be possible. This technically correct answer in fact dodged the implied criticism that such carefully planned primary school timetables were unrealistic. Still one cannot argue with the logic of the answer given. No doubt there are readers who would agree that all other subjects do take a very minor place compared with the fundamental subjects.

The Parallel School

When everything has been said, from a British point of view, about the structuring of the curriculum according to its preconceived, centralised thinking, the Belgian Ministry must be warmly congratulated for bringing forward for discussion and examination the learning and teaching possibilities of the periods of the day, week and term during which a child does not attend school. The concept of the parallel school, as one speaker put it, has invaded the curriculum through the mass media, holidays abroad, and so on; it needs to be thought of as part of the whole curriculum, part of full-time education's responsibility towards the whole child. The attitude so demanded of the teacher, that he looks outward from the classroom, is not unfamiliar in this country, and the type of teaching which advocates exploratory means of self-education, especially where homework is concerned, has become part of the British way of educational life—that is, if what one reads in the educational journals is a true reflection of what goes on in the majority of primary schools. A grasp of the importance to the child, during these formative years, of instant news coverage, up-to-date advertising in the home, colourful and informative packaging

and the deliberate aiming of advertising at the children themselves rather than towards their parents, is as important to us as it is to the Belgians and their neighbours in the Common Market.

The speaker on this occasion brought forcibly to the attention of the teachers the many possibilities that are open to educational exploration by the child, and in particular he emphasised the encouragement of out-of-school activities, which could be readily applied to in-school equivalent study. Here he seemed to me to be expressing a British concept of some years standing, but I found myself wondering about his underlying reasons. Was this aspect of the child's learning experience being used to justify the use of more school time during the day for the fundamental subjects? Was the speaker trying to keep down the amount of time to be utilised for *'l'eveil'*, by suggesting that use be made instead of the natural learning which a child achieves more and more from the 'box of delights' which stands in the corner of the living room and in this affluent society is even sometimes found in the child's bedroom? (As a point of interest—it is not uncommon for a television set in Belgium to be able to receive nine channels: two Belgian, (one French, one Flemish language), two German, two French, two Dutch and BBC II). Was the speaker attempting either to make up for the time lost if the five day week were introduced? Or was he suggesting that the scanty time available for the 'awakening subjects' during the six day week would now be automatically compensated for? Whatever the answer, I thought his suggestions for school time activities which would ensure the full use of the 'parallel school' were sound. He believed that the teacher should concentrate upon bringing about a high standard of reading ability and at the same time might direct the child towards a good choice of 'message'. The child is, after all, a future consumer, a sure target for the purveyors of the mass media.

Out-of-School Activities

Further to the in-school attempt to make the most of the child's leisure time activities, ideas were put forward related to the need for the child to have somewhere to go, away from the ordinary school, during the evenings, weekends and the longer holidays. The suggestion was made that after-school centres might be the answer. Obviously here the speaker was suggesting that in his free time the child needed the cultural background of the teacher to augment, or indeed to stand in the place of, the parental culture. The teachers greeted the suggestion with enthusiasm; but at the same time repeated the universal phrase, 'Who will provide the money?' They asked what would have to be forgone in order to pay for an 'out of school cultural and activity centre', and how would the teachers who participated be reimbursed for the time which would be expected of them, and indeed which they would be only too ready to offer?

In conclusion, this particular speaker reminded us that we were now in new times with extra needs. Schools must be ready to participate in the out-of-school activities in an organised and effective manner. As a visitor from abroad, I could only ponder on the reason for and the importance of these suggestions for 'out-of-school cultural needs'. Did the Ministry feel that there was an imbalance to be rectified between fundamental subjects and others? Was it trying to regulate the spread of culture throughout the country? By suggesting that the

centres were needed in rural areas more than in the cities, the authorities drew attention to the fact that the number of all-age schools in the rural areas were considerable. From the tone of the teacher audience, and from remarks made by some of the foreign delegates, it was clearly a sore point that Belgium still tolerated thousands of small all-age schools in the country areas.

Looking back over the week as a whole, I found the lecture given on the last day, that dealing with the use of time outside the school, the most interesting. The rest of the conference—and I must be frank, writing as I am against the background of a different tradition—seemed to be concerned with an attempt to maintain a too rigid teaching system, with too great an emphasis on the teaching of the fundamental subjects, and comparatively little on the need, during the formative years, of a wide educational experience. Most of the content of this National Conference in Belgium lies with us in the hands of headteachers in their individual schools.

But perhaps the most impressive thing about the Conference was that such an airing of national views, in the presence of delegates from many parts of the world, should have occurred. The Belgian Government made the visitors very welcome, and it was a great advantage that with one language as the *lingua franca*, views could be exchanged by the delegates with all the overseas delegations.

The Teachers' Centre Concept

Teachers everywhere help each other to bring new ideas into their work and to tackle their job with greater confidence. This they have always done. Recently some more organised ways of facilitating the process have developed. One of the most striking is the concept of a teachers' centre. This has been given realisation in many places and in a number of different forms.

The centre in the London Borough of Newham provides us with one example, which can here be examined in contrast to realisations of the teacher centre concept in Maryland, USA. In Newham the teachers' centre has had little part to play in pre-service training. Teachers at work in the borough, rather than university or college of education staff, have fashioned the pattern of its development. In our American example the role of the co-ordinator and of the university has been much more significant and the assignment by the University of Maryland of about half of its student teachers to centres is evidence of arresting new developments in pre-service training. Nevertheless there would seem to be agreement on both sides of the Atlantic on the significance of the centre idea and certainly some of the problems outlined in our report on the American developments have been encountered by those working here. In the matter of ends which teachers' centres might be expected to achieve there is close agreement.

A Centre in Britain

Ronald Arnold is an HM Inspector of schools in the eastern region.

R. ARNOLD

In Newham the centre's layout and resources were determined by what it inherited, the top floor of a three-decker school, built in 1897. The hall became a concourse and display area, the classrooms centres of activity. The LEA inspectors and advisers, with the full-time 'teacher-in-charge' of the centre, are committed to working out new ideas to meet present and projected needs. They have worked in partnership with the teachers of the borough to make the centre an effective instrument of development work, in-service education, and professional renewal. In fact, the process is almost that of a chain reaction. There is nothing haphazard about it; the objectives are identified, the courses provided, the study groups formed. Each activity suggests another, and the pattern of linked activities that

emerges is related to the set of central objectives, which are developed in their turn.

Teacher Working Parties

Perhaps the best starting example is that of a working party which generated an unexpectedly large number of possibilities. The secondary inspectors invited heads to form a small working party to consider aspects of re-organisation and their implications for in-service training. In due course this group suggested that it should be paralleled by subject panels, which would work on certain topics in relation to their own fields of interest. These were:

(i) Curriculum content for the first two years of the comprehensive school and links with the primary school.
(ii) The raising of the school leaving age.
(iii) Teaching the full ability range.
(iv) Integration with other subjects.
(v) Equipment, facilities and resources.

The secondary inspectors and advisers formed these subject panels by open invitation and launched each one with a talk by a visiting speaker, usually an HMI. Most areas of the curriculum are now represented and some of the panels have developed into subject associations, to add to those that already existed in the borough. One of the first panels to be formed was English, which began with a talk on developments in the teaching of the subject. This meeting was arranged jointly by the primary and secondary inspectors, and it was attended by very nearly a fifth of the teaching force of the borough. It gave rise to a good deal of teacher activity in the shape of secondary working parties, whose discussions included but went beyond the original brief to the subject panel. For their part, the primary inspectors followed up the meeting by inviting to the centre the 'Children Talking' team of Staffordshire NATE. Six groups of primary teachers now meet to discuss transcripts of tapes they have made of children's talk, and they are joined by a lecturer from London University Institute of Education. They are at present engaged in making up a master-tape of their material.

Thus, the in-service courses are seen not as once for all efforts, but as an element organic with the teacher activity. How well teachers respond to need is illustrated by the fact that a recent course on the teaching of reading was attended by 305 of the 875 Newham primary school teachers. This course was linked with a project on the *Breakthrough to Literacy* programme, which the authority financed in pilot schools. Heads of certain of these schools spoke on the course, along with outside speakers who have been involved in research into reading. The contribution of the heads was itself the product not only of their practical work on the project but of their regular study group meetings with other interested teachers. In short, then, the courses and the development work are seen as mutually nourishing activities; together they accounted for no fewer than 4,000 teacher attendances at the centre in the recent term.

The number and range of the working parties and similar groups illustrate how such a degree of teacher involvement is made possible. One working party set itself the task of creating an infant classroom

in the centre, principally to show probationers and young teachers what might be achieved. The result was a stimulating source of ideas and encouragement which prompted a second group to follow it up with a junior classroom. Another working party, composed of junior, infant and nursery school heads, was formed by one of the primary inspectors to make recommendations on the education of young children in multi-racial schools. It has organised courses for welfare assistants covering such topics as language, social training and play, and has produced a useful booklet which has been issued to teachers throughout the borough. This, by the way, is also an example of the centre's support for inexperienced teachers, who are encouraged to see it as a teaching resource. There are frequent talks and discussion sessions for probationer teachers, and at one series of meetings young teachers of longer experience played an equal part with the primary inspectors in running tutorial groups. It is also an example of the inclination of the working parties to produce material which can be used in the schools. The party considering integrated social studies in the first year of the secondary school has devised an outline of work which it has since offered to schools in the borough. Similarly, the one involved with humanities in the upper forms of the secondary school is producing resource material, and it has organised conferences for fourth and fifth year pupils on a variety of themes. There is also a group working on a Mode III interdisciplinary CSE syllabus issuing in a multiple certificate. It has already produced a British studies syllabus which qualifies candidates for three passes. Another is proposed for a five-subject syllabus based on the literature and history of social change from the repeal of the Corn Laws to the present day. The teachers' centre serves as a focal point for CSE development, notably in the display facilities it offers for course work and similar material.

The Arts

The Centre has a specialised counterpart in the form of the drama/arts centre. The two do not operate in isolation, but the drama and art advisers have found that the latter gives them better scope for their activities. Here again it has been a question of adapting part of an old school and here again handicap has been turned into asset. It provides for a teachers' drama group and a youth theatre and for various creative activities for children. Some of these take place after school, when the peripatetic drama teachers and art teachers organise open sessions. Others are on a 'block release' basis, with the intention of reproducing as nearly as possible the atmosphere of a residential course. A class spends every day of a week at the centre and works on drama-based projects with one of its own teachers and the peripatetic drama teachers.

Another activity that has been particularly successful has been a programme of children's theatre visits to infant schools, a scheme which allows the class teacher and the visiting drama teachers to work in close co-operation. Each sequence opens with a meeting at the teachers' centre between a group of infant school heads and a primary inspector and the drama adviser. This is followed by a 3-session course for class teachers from the schools involved in the project. Working with the peripatetic drama teachers they evolve a play or a piece of dramatic activity which they then take back into the schools to develop with the children elaborating it into art and writing. The

next stage is for the peripatetic drama teachers to come to the school and join with the two teachers in developing another dramatic experience, which gives rise to more work by the children. Among the interesting forms this has taken has been a link in one school with the work in the *Breakthrough to Literacy* programme.

A Resources Centre

All this teacher activity needs resources, and the centre tries not only to meet but to anticipate demand. It is common for a study group to ask for the extensive reproduction of material it has produced for use in schools. It is also common for a teacher to ask for anything up to 200 copies of material for classroom use, e.g. diagrams, pictures, cut-outs, etc. and the centre now has an electronic scanner to meet all these needs. There is also a collection of over 3,000 coloured slides which was built up by public appeal. In the first instance the Association of Science Teachers was invited to make recommendations on the level at which each slide would be useful. After this there was an open viewing which produced interesting ideas from teachers of various subjects. At the moment the teacher-in-charge at the centre is building up packs of slides for infant schools, with information sheets and a tape recording to accompany each. Finally, there is the library, which among the more usual reference material contains an exceptionally good collection of contemporary poetry. This too is an example of the will to let no promising line of development peter out. A weekend poetry course aroused an enthusiasm which resulted in groups of teachers forming to discuss poetry in general and read modern poetry in particular. The authority promptly bought this large collection for the library and it will be a particularly valuable resource.

The Newham Teachers' Centre, to use the term in its collective sense, would not yet claim to be fully developed. In fact it is doubtful whether it would accept the concept. The moment its role could be codified it would feel itself circumscribed. The only statute is not to miss an opportunity, for that might mean missing a dozen that could grow from it. This kind of situation can develop only from a real partnership and that in its turn from understanding and reciprocal respect.

A Centre in Maryland, USA

LEON BOUCHER

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Here the development of teachers' centres resulted from an experimental co-operative venture in which the University, the State Education Department and a County School Board were involved. Now there are fifty elementary and secondary schools in seven counties and in Washington DC, all associated over centres with five teacher education colleges, and the University of Maryland itself assigns about half its student teachers to centres.

A centre is essentially a school, or a cluster of schools, headed by a co-ordinator who is appointed and paid equally by the college and the school system in question. He is responsible both for students in initial training who are assigned to the centre, and at the same time for the in-service experience of the staff of the schools forming the centre. In satisfying these dual needs, he is able to draw on the resources available from both his employers. In effect, there is a tendency for the school staff to assume an increasing responsibility for the pre-service training, aided by college staff where appropriate; and for college staff increasingly to act as 'resource personnel' for in-service work. To emphasise this change of roles, however, is to miss one of the most significant features of this concept. The idea that pre-service and in-service training are separate and distinct is giving way to the idea that all persons involved are 'students of teaching', in which a given individual, whether a student at college, a teacher in the school, or a college lecturer might find himself at one or the other end of a continuum in various aspects of teaching. The centre idea implies sets of students working with sets of teachers working with sets of lecturers all at different levels of experience, helping one another to learn more about teaching. While one of the partners may be teaching the children, the others are learning from each other.

The pre-service student thus receives a variety of experiences. Some of these derive from intensive work with one or a few of the teachers in the school, others derive from extensive contact with a wide range of school activities and theoretical studies which can be based on and related to practical situations within the centre. Study of the effects of this approach suggest that students who have been assigned to centres, when compared with those who have followed a more traditional programme, participate more widely in the total school programme, use a greater variety of instructional techniques, and become less close-minded, less apathetic, and less resistant to change. The in-service programmes vary, naturally enough, from centre to centre. In some cases, there is little more than a facilitation of access to courses at the college, which are made available free of charge in return for the teachers' contribu tions to the pre-service work. In other cases, however, the teachers receive guidance in techniques of supervision, for example in the use of interaction analysis; of simulation games, of micro-teaching—the technique by which a particular instructional skill is practised on a small group of one to five learners, is video-taped, analysed, and then retaught to another group until the

skill is mastered; or they may take 'mini-courses', small packaged programmes applied to specific teaching behaviours.

Clearly, in these centres the school is really involved with the college in the teacher-education process. It would, however, be wrong to suggest that any one centre is a 'model' for all: they vary in terms of the situations and personnel involved. There are, too, many problems which are unresolved, a fact which Dr. Collins of the University of Maryland and his colleagues were at pains to emphasise at a 'clinic' held in Washington in April, 1970, and attended by persons involved in problems of student teaching from all over the USA and Canada. One major set of problems concerns role relationships—some teachers do not wish to be involved, some head teachers see a threat to their control over what is going on in 'their' schools, and do not readily accept the presence of the co-ordinator who has a responsibility, emphasised by the dual nature of his appointment, to persons 'outside' the school.

A second set of problems concerns the degree of influence and responsibility to be accepted by the organisations involved. In a material sense, a centre requires space and materials to operate effectively, and it has not always been easy to agree on the extent to which the college, the individual centre, the school district or the state should provide these facilities. Nor has it been easy to decide who should determine the policy and practice of a centre, and indeed this problem is as yet entirely unresolved. Apart from the schools and colleges themselves, the student-teachers have a voice which may well be heard; the local communities may also wish to be heard, especially where they are deeply involved in 'their' schools; and the professional associations are obliged to think very clearly what is meant by greater participation in the training of new entrants to the profession by teachers serving in the schools.

A third set of problems concerns the extent to which it is practical and desirable to extend the centre concept. In a situation where there can be a degree of selectivity of schools, teachers, classes involved in in-service training, it is possible to create a centre which can provide suitable facilities, but all concerned in Maryland admit that some schools, some teachers, some classes cannot provide these facilities. Furthermore, while the authorities concerned have welcomed centres as a practical expression of true partnership, it is also true that authorities maintaining the schools on which centres have been based tend to see the centres as an invaluable source of recruitment and as 'models' for the kinds of teachers they desire; teacher colleges, on the other hand, as institutions of higher education, must necessarily have a wider perspective, a more 'universalistic' view of the role of the teacher, which may conflict with that exemplified in the centre.

It is no easy task to create a centre which embraces a variety of social environments, a variety of organisational patterns, a number of independent but interrelated institutions, and an even larger number of individuals, each with his own perceptions and expectations. The difficulties, however, should not detract from the idea behind the teacher education centre concept. It merits a great deal of attention by those who are searching for ways to achieve closer relationships between schools and colleges, to integrate theory and practice, to replace the separation of pre- and in-service training by the notion of continuous training implied by the phrase 'students of teaching'.

The emphasis on health and hygiene gives way to recreation and self-expression.

New and Old in P.E.

J. WYN OWEN

J. Wyn Owen is lecturer in physical education at the University of Hull.

A recent advertisement for a teacher of physical education carried the following paragraph:

> Apart from a wide range of traditional physical activities the course includes fencing, archery, horse riding, swimming and sailing in mixed ability groups. Candidates should state their willingness to assist with extra-mural activities at outdoor pursuits centres. This modern school has excellent sporting facilities including gymnasium, tennis courts, extensive playing fields and outdoor swimming pool. There is a school mini-bus.

Another school seeking a similar teacher advertised

> . . . well equipped with two gymnasia, swimming bath and extensive playing field and expansion in numbers gives the opportunity to develop field and out-of-school activities like riding, gliding and skating to a much greater extent.

Yet another school was looking for a teacher with 'an enthusiastic interest in the teaching of physical education as part of a wider scheme involving education for leisure and also as a creative experience'.

Twenty years ago the vacancies columns sought 'instructors to take charge of physical training in the school and to take a major part in the training for athletics and games.' Posts for women frequently referred to the teaching of remedial gymnastics and hygiene.

It is evident that there has been a great change in the content of school physical education and in the attitude to the subject. Formerly there was a decided orientation towards health education and hygiene. Today there is a strong emphasis on the recreative and expressive aspects of physical education.

When physical education consisted of a fairly narrow programme of gymnastics and one or two winter and summer games, the work of the physical education teacher could be defined with comparative ease. It was also probably true to say that he or she could be thought of as an expert in the actual practice and teaching of the activities in the school's programme. Since more sports have been included in physical education, it has become clear that the specialist teacher cannot command expertise in all these activities. Indeed, he or she may be comparatively inexperienced in some of them and must rely heavily upon support from other teachers in the school who may be experts in particular activities, or from persons who are outside the school altogether and may not even be qualified teachers, e.g. golf professionals, fencing instructors.

Thus the place of the specialist in a school may shift from being the expert in a narrow field to that of being the co-ordinator and organiser of a much wider scheme of work. In a study of the way in which the

size of a school may influence the type of work which is done in physical education, Saunders and Witherington* cite the case of one school in which one specialist teacher of physical education and twelve non-specialist teachers ran fourteen different activities. One would assume that if such a programme is to be successful it requires that the physical education teacher can establish sufficiently good relationships with other teachers to interest them in the first place, and that his subsequent organisation is of a standard which encourages them to continue their interest and to contribute to the scheme over a period of time. Thus a school which embarks on a wide-ranging scheme of physical education will wish to appoint teachers of classroom subjects who have an interest in different physical activities and who have undergone some training in physical education in their college of education or university. Such a school will also need to look for a specialist in physical education who displays qualities of leadership, tact and organisation, rather than, or in addition to, expertise in a particular sport. Not only will this person have to timetable his activities skillfully, but he will also have to assess the likely success of a particular activity in the hands of a particular member of staff . . . a delicate problem.

However, even if we assume that a school has a highly competent specialist in physical education who is supported by a devoted team of non-specialist teachers, there will be many sports and physical activities which a single school, acting alone, will not be able to offer. It is possible, though, that when schools work together, as some do already, the number of pupils, available facilities and expertise can be assembled to provide for less popular sports. Here the goodwill within the school must be extended to intricate co-operation between schools. Indeed, the logical outcome of this sort of thinking is to arrange for an organisation outside the schools to provide a service for the schools. Thus a local authority might establish centres where facilities and staff are available, as in the case of public swimming baths today. For the fullest educational benefit to be derived it would be very necessary for the staff of such centres to be trained teachers. Further, to use such centres to the best advantage, the time-tabling of physical education ought to be arranged on a block basis, so that an afternoon might be set aside for the subject. Clearly, the single period cannot serve a useful purpose in this context.

Not only does this outward-looking arrangement provide a wider choice for pupils, but it might help bridge the gap which exists between participation in physical activities at school and after leaving school. It could be argued that if children see what is available in community recreation and are accustomed to visiting such centres whilst at school, they will continue to do so after leaving.

Thus schools in some areas may provide physical education as a varied school-based activity staffed by teachers who have broad teaching commitments, whereas schools in other areas may look to centre-based provision where the individual teachers work in narrower, more specialised fields, but the children are offered a wide choice. The schools themselves in such areas may offer only a limited programme or even no programme on the school site.

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* Saunders, H. D. and Witherington, K. S. Extra-curricular activities in the secondary school. *British Journal of Physical Education*, 1, 1, 1970.

The changes that are taking place in physical education cause disquiet for some physical educationists. Whilst they can see the argument behind the move for more variety, the freedom to choose one sport rather than another or even to opt out altogether, they see dangers of physical education becoming something of great width and no depth. There might be a temptation for the cafeteria approach to develop into a mere dabbling into physical activity. For physical education to be truly effective and for a lasting interest to be established some real prolonged effort must be expended on the part of the child. A genuine feeling for many sports can only be developed after sustained application. It may be that wider programmes will make for greater continued participation after leaving school, but this is only one of education's many, as yet, unproved hypotheses.

Another concern of the physical educationist has to do with his own position in directing a wide variety of activities. How many of these activities can he attempt to do himself? And where outdoor pursuits are involved, how much time is it reasonable that he should give at week-ends and during holidays? It is too easy for a conscientious person to overstretch himself.

Then there is the growth in the part-time employment of non-teachers for some of the sports not normally conducted on the school site. If physical education has a contribution to make to education as a whole, then it follows that teachers are the people who should be involved in it. It is appreciated that teachers may not always be available with the necessary expertise, nevertheless, there is a clear re-emergence of a professional problem here—a problem which was put aside when the retired army sergeant was replaced by the trained teacher.

Finally, there is, too, the question of the traditional aim of physical education to be considered, i.e. the establishment of an attitude to positive health. If a lasting interest in a sport can be cultivated in school through recreation, so much the better; but there will be many pupils who never acquire this taste. For them the importance of some sort of exercise will be even greater. There is, therefore, a growing need for a real effort on the part of teachers of physical education to put across an explanation of the physical basis and value of exercise. Dr. Dalzell-Ward wrote recently 'The type of pupil who is resistant to physical education may then accept it when its rational and intellectual basis is explained.'*

It is to be hoped that the successful applicants for the posts mentioned at the beginning of this article will be able to take children riding, skating and gliding, will be able to involve them in wider schemes for education for leisure and for creative experience, will even be able to drive that minibus—and may be able to tell them how they can hold their stomachs in and their backs straight and why it is a good thing to do so.

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* Dalzell-Ward, A. J. Physical Education and Health Education. *British Journal of Physical Education*, 1, 2, 1970.

Educational Strategy for Developing Societies

Adam Curle

Tavistock Publications 90p

Professor Curle first published his compendious study of the role of education in the third world in 1963; as he implies in his introduction to this new edition, any change in the situation now is change for the worse. For example, despite a great expansion in school enrolments, the number of illiterates in the world is actually increasing. In other words, population growth is outpacing the expansion of the schools: this is resulting, in the developing countries, in an increase in adult literacy that is only 78 per cent of the annual increase of the adult population.

One of the basic reasons for cultural and educational difficulty in these societies, the author suggests, is closely related to one cause of their economic problems: having until lately been colonies, they have tended to maintain institutions and systems based on those of their former masters. So far as education is concerned, a system designed for (or rather, evolved in) a long-established European nation is hardly likely to be best suited to meet the needs of an emerging African or Asian country. Yet this, in most cases, is what actually exists. Since such countries have made little economic or educational progress by emulating the *mores* of the developed nations, Professor Curle proposes an alternative set of values as the goal of development, to replace the simple pursuit of wealth. These values all relate to the quality of life, which clearly presupposes an important role for education in achieving them. In order to fulfil this role, the educational emphasis needs to be shifted from European or American models onto the indigenous culture; the schools have to be firmly rooted in their own communities, teacher training must be of high quality; and post-primary education should be confined to those likely to profit from it and help national development.

Against the charge that this is a reactionary programme that would slow progress down, Professor Curle cites the evidence of the decay of rural communities in the third world. And the approach he advocates, or one very similar to it, is in fact already being used in Tanzania.

Whatever view one may take of these proposals, it cannot be denied that the *status quo* is producing stagnation in the poorer countries, and a widening gap between them and their wealthy Western neighbours. Education is clearly one of the important keys to regeneration, and the arguments set out in this concerned, lucid, but above all, readable, book deserve the most attentive study.

D.O'R.

Education, Health and Behaviour

by M. Rutter, J. Tizard and K. Whitmore (Eds.)

Longmans £3.25 (paper £2.25)

There is little that is comforting in this book. Of all children aged nine to twelve in the Isle of Wight 'One . . . in six has a chronic handicap of moderate or severe intensity (p. 6) . . . . Whatever form of special educational treatment is most effective, these children were not getting what was needed (p. 356) . . . [and] over half the parents expressed some dissatisfaction with the present services [which] were better than or at least as good as those found in other parts of the country' (p. 355).

These are three of the findings in the surveys described in this important book. Important not because it contains much that is unexpected, but because the detail and rigour of the investigation confirm these conclusions without doubt; and to

the extent that the Island is representative of England generally—as the authors claim that it is—they also describe a most disquieting situation in the rest of the country. Some of the details revealed are as follows:

1. The percentage of children with IQ below 70 was 2.53 (p. 39) (of whom one third had a neurological disorder) (p. 74), and 3 children per 1,000 were so severely handicapped mentally that they were unable to attend school (p. 52). Reading attainment was 28 months below chronological age in 6.6 per cent of pupils (p. 36) —twice as many boys as girls (p. 42)—, and 28 months below level of intelligence in 3.7 per cent (p. 36)—three times as many boys as girls (p. 42). No evidence was found of a single syndrome of specific developmental dyslexia. In short, 8 per cent of all pupils were handicapped intellectually or found difficulty in reading (p. 51). One in six of these was in a special class in an ordinary school, and a further one sixth in special schools (p. 52). 'Most of the children with reading difficulties had received no kind of special help in reading' (ibid.). 8 per cent of those with specific reading difficulties and 24 per cent of these who were intellectually retarded had marked emotional and behaviour disorders (p. 104).

2. 6.8 per cent of pupils had clinically significant psychiatric conditions (p. 181) but only one in five was receiving any kind of treatment and in nine cases out of ten difficulties had not been expertly diagnosed or assessed (p. 271).

3. 5.7 per cent of children had chronic physical handicaps of which asthma was the most common (2.3 per cent of all pupils) (p. 295), and they tended to be more emotionally disturbed than other children. The medical aspects of their treatment were adequate but in one case in three they were not being satisfactorily helped with their educational and emotional difficulties.

4. One handicapped child in four had more than one handicapping condition (p. 349).

The authors make several recommendations: one stands out. 'The problems of handicapped children should figure large in the training of teachers, both of primary and secondary school children' (p. 365). From rigid criteria the investigators reported a figure of one child handicapped in every six pupils. If they were evenly distributed there would be about six in every junior school class. In the English primary school system, which some think the best in the world, it seems probable that more than half a million pupils are not receiving the help they require—leaving aside all questions of social need. Yet the standards in this report are arbitary and describe only severe and chronic handicap. Many more children face serious difficulties that may be milder and more temporary. Even if one believes that a special school or class is the best way to help a child with a special need it is unrealistic to expect that there can ever be sufficient places. The staff of every school must therefore as far as possible cope with their own pupils who are in difficulty, and by training, proper equipment, appropriate staffing ratios and ancillary help, be assisted to do so.

This is not an easy book to read, and with 436 closely printed pages and 500 references it is forbidding. However, all social workers, LEA officials and teachers must be alert to its implications. Thus it would have been useful if the last chapter had been expanded and written as a lucid, readable, comprehensive summary that could be obtained separately if required.

M.J.T.

The Costs of Further Education—A British Analysis

by C. Selby Smith

Pergamon £2.00 (Flexicover £1.50)

Further education seems to have avoided the major scrutiny applied to all other sectors of education during the past ten years, although aspects of it are to be found in the reports on higher education (Robbins) and on the education of fifteen to eighteen-year-olds (Crowther). In applying his own microscope to one slice of the FE

scene, Dr Selby Smith makes it clear that he is *not* concerned with how much money is spent on education (though he charts the rising share of national expenditure claimed by education in the decade up to the academic year to which the figures in his book apply, viz. 1964/65): his interest is in the question that arises once the overall education subvention is settled—how should it be divided between the competing sectors, and more specifically, what sort of allocation should go to further education (i.e. education in the technical colleges)?

The technique adopted for the study is to take a number of courses (four degrees, five HNCs, five ONCs, and four City and Guilds Certificates) being run at six different colleges (three broadly of one type, and three of another) in three non-metropolitan areas (the Southern region, the South West region, and the West Riding of Yorkshire), and subject them to a number of tests (involving a good deal of highly technical, economic and statistical analysis), to measure costs and benefits and relate them to each other. There is also a discussion of futurity, risk and project selection, from which Dr Smith graciously excuses the general reader. The book ends with a summary of the current financial situation, with a suggestion for its reform.

There is an interesting appendix, in which an attempt is made to humanise the statistical material that has gone before by giving half a dozen examples of real people, describing their jobs, their salaries and the educational path they trod. This is followed by a useful (if rather short) glossary, and an impressive (not to say daunting) bibliography, occupying nine and a half pages! There is also a competent index.

The author describes the book as a report on a pilot study. It certainly sheds a pilot light on several hitherto uncharted areas of FE. It will be of inestimable help to future researchers and policy-makers, and there is much in it that is assimilable by the lay reader.

D.O'R.

The Extra Year

by J. W. Tibble (Ed.)

Routledge & Kegan Paul £1.75

This is a short book but one may hope that it will be widely read. Its principle aim is to show that the raising of the school leaving age demands a reappraisal of all our established notions of what constitutes secondary education. Thus Malcolm Seaborne percipiently emphasises the changes of objective that developed from earlier efforts to prolong the period spent in school. Professor Eggleston follows with a masterly presentation of evidence for the assertion that pupils leave school not because of their low ability but because they are repelled by the way a school is organised. He believes that schools '*can* use their extra year of compulsory attendance to offer help to the category of pupils who have so conspicuously failed to receive it in the past'. A change of organisation, a change in the relationship between teacher and pupil, a change of method in teaching, a change in the nature of the terminal goal to secondary education—bring these about and the extra year might succeed; without such change it will fail.

Another useful contribution comes from Dr Lawton who analyses the shortcomings of the Crowther and Newsom reports in the light of tendencies towards a mass expansion of secondary education. He goes on to describe some of the curriculum development projects which have been initiated mainly by the Schools Council and finally to set down the daunting set of problems which those seeking profound changes have to face.

In some ways the effect of this book is depressing. The American contribution from Professor McAulay is an attractive presentation of the case for emphasising individual achievement as the central purpose of curriculum reform but only if there were to be a substantial increase in teaching strength and technical aids would these ideals be realisable. Nevertheless they seem realistic compared with the aspiration of another contributor 'to alter the ethic from a competitive and acquisitive one to a co-operative and community

one.' Individual schools have attempted this sort of spiritual revolution but are always confronted with the problem that there are some kinds of individual achievement which society values and others which it condemns or ignores.

It is emphasised rightly that achievement in the extra year will depend on the character and quality of preceding educational experience. But here the forward look towards further education is no more than a hasty glance. Professor Eggleston suggests that the problems for the schools might be solved if all divisive selection procedures were postponed to the further education stage. Mr Burgess, in a somewhat dreamy haze about this issue, wants a 14–18 'comprehensive college' system offering everything except 'A'-levels and including maths, English, science, psychology, sociology and economics in all courses for part-time as well as full-time students!

D.M.H.

Head of Department

by Michael Marland

Heinemann £1.25

For every head teacher of a large comprehensive school (and there are over 300 of them) there are 15 or more heads of departments. Up till now very little has been written to help them come to terms with their increased responsibilities and the increasing complexities of their task, and for this reason alone this rather slight volume is to be welcomed. The author confines himself to largely prescriptive comment on 9 major divisions of the functions of heads of departments in these schools in the evolutionary stage in which we know them now, without extending greatly across the uncharted areas of development in newer forms of school organisation. Starting from the nature of the departmental team and the way in which it discusses and reaches its objectives, the book deals with pupils and teachers as individuals and groups, the subject and its development, the facilities available to a department and responsibilities towards students, teachers, parents and the school as a whole. Mr Marland's standpoint is to treat these 9 divisions as areas in which extra productivity or effectiveness will be needed in the large comprehensives. They are the standard list which occurs in many of the courses now being run by University Departments of Education, Local Education Authorities and H.M. Inspectors. By confining himself to giving reasoned advice on these aspects developed out of his own experience and observations, Mr Marland has provided what is likely to be a very useful initial handbook.

Later volumes in this field should perhaps take a more philosophical and argued position in a more exploratory context. After all, the present context in which large comprehensives have to find their structure of organisation is dominated by a nationally agreed payments and salaries system set up for altogether other purposes and in which status and responsibilities are amost accidental by-products. As the new large complexes grow in numbers and develop in size and structure, new types of internal organisation are being devised in spite of the salary structure which has to be bent in order to accommodate a wide range of new managerial concepts. Even when bent however, it still remains rigid, and this in a situation which calls for increasingly flexible forms of organisation is too much of a constraint. Among the challenging developments which are altogether outside the scope of Mr Marland's approach are for example those concerned with faculties or groups of departments working together, accepting sometimes permanent and sometimes temporary delegation of executive and planning power or authority in order to establish new projects and manage them. Mr Marland's concern with giving advice to the head of department himself does not give him an opportunity to say much to help the Headmaster consider the selection of his heads of departments, or how to brief and train them for their responsibility; nor is there discussion of the importance of a head of department's position as a training ground for future responsibility at higher levels. It would also be useful to have some treatment of the managerial requirements

at the level immediately below the Headmaster, Deputy Head and Senior Mistress, but above the 15 strong head of department team in whom it would be unrealistic to expect a high level of managerial capacity equally distributed, particularly where this is not a factor effectively taken into account in their selection. This is one of the reasons why some Local Education Authorities have been experimenting with new figures inserted into the hierarchy of authority and decision making inside some of their larger schools; examples include the Academic Registrar of Glamorgan, senior tutors of many senior high schools, the high level pastoral figures and the senior administrative officers on the administrative and clerical side.

There is some evidence that one effect of the rather standardised application of Burnham by overworked and possibly over-centralised local authority administrations has produced far too large a gap between the over-loaded, over-centralised top management and the next rank of executive capacity. Where this rank is represented only by 15 heads of departments running units from 2 to 10 strong and teaching three-quarters or more of their time, plus a small group of pastoral specialists with whom there may be conflict or tension, this may be one of the factors inhibiting effective adaptation to challenging new tasks, techniques and project development in these large and up to now unwieldy units.

This is not to damn Mr Marland's book; there is every sign that it is needed and will be appreciated by a large number of people in a job that the recent history of educational change, especially in its institutional aspects, has not made too easy.

P.C.W.

Inside the Colleges of Further Education

By Adrian Bristow

HMSO 30p.

Mr Bristow says in his introduction: 'This is an attempt to write a cheerful and engaging account of life and work in a college of further education.' Even to some teachers the image of the technical college is that of a knowledge factory, and it is the measure of Mr Bristow's success that he has breathed so much life into this account of the complex and confusing patterns of education to be found in a local college.

Although he disclaims any pretence to have written 'the definitive textbook, illuminated by scholarship and refined by research,' the author has in fact provided much useful information in a form which is more palatable than most college prospectuses, and a good deal less pretentious. The chapter on 'The Range of the Work', by making an imaginary tour of the departments, gives some idea of what it will be like to be taught in FE. Those who think education should be solemn as well as serious may be shocked to find a reference to "flaxen-haired *au pairs* . . . and volatile virgins of good family' in a sentence after the description of GCE 'A' and 'O' level courses; but at least this indicates the variety of provision to be found in most colleges.

The reader will find quite serious discussion of central policy issues interspersed with the more racy passages of description. On pages 34 to 38 there is a succinct and penetrating account of the impact of the Industrial Training Act on the FE colleges as seen by an experienced principal. The chapter on 'Career Opportunities for Girls' is realistic about the traditional teaching, nursing and secretarial openings while drawing attention to newer fields—and to the niggardly financial rewards still thought sufficient for highly trained ancillaries.

'Aspects of Student Life', 'the Spirit', 'the Flesh', 'General Studies' all receive lively descriptions. Not everyone will agree with every comment, and many lecturers will think that frankness goes too far on, for instance, liberal studies. 'It is, they feel, better than working, if dead boring. These are difficult classes to teach by any standard . . .'; but the balancing comment follows: 'It is a gallant attempt to nurture a sense of values, an awareness of responsibility towards others. . . .'

'The chapter on 'Public Relations' perseveres in the path of truth however painful. 'The apathy and occasional hostility of

the grammar schools . . . is regrettable. Our overtures . . . are rejected or cooly turned aside and it is difficult for us to promote co-operation and understanding.' And in conclusion the author says that FE is in a state of flux, doubt and indecision, but hopes that raising the school-leaving age will draw the schools and the colleges closer together. An honest book that can be recommended to parents and teachers and new members of governing bodies.

R.M.P.

Discipline and Morale in School and College

M. F. Cleugh

Tavistock, £1.75

Adults Learning

Jennifer Rogers

Penguin Books 45p.

In her first book since her valuable *Educating Older People*, Dr Cleugh illustrates and discusses links between individual and group relationships, learning, discipline and morale. It is essentially about common sense and common decency and perhaps none the worse (apart from the price) for the fact that it dresses these qualities in a garb which may make them acceptable in more sophisticated company. There can be no doubt of the value of the reminder among noisy complexities. But is it practicable any longer to be quite so simple?

Mrs Rogers's book cannot fail to contribute to the morale of a service which depends for its strength on internal factors more than any other; it proves that it is possible to write a book which is simple to understand but not superficial, rooted both in practice and in up-to-date scholarship. Adult education was already in her debt for the BBC's *Teaching on Equal Terms*. *Adults Learning* draws on this and on more fundamental sources to produce a more detailed and coherent book which can be confidently recommended to any practising or intending teacher, trainer or organiser concerned with adults in any institutional context.

The chapters dealing specifically with teaching methods are thoroughly realistic and, like the whole book, exceedingly well illustrated with student and trainee opinion Rightly, they concentrate on some aspects and leave out what is already well described elsewhere. Unfortunately there are both unnecessary preoccupations and lost opportunities in the chapters on Projects and Discussion, and the integration of vocational and industrial experience is not always complete. Nevertheless this is the first attempt to look at the why, the wherefore, the how and the what of adult learning processes in education and industry across the board, and in the light of modern knowledge. It is realistic, practical, well argued and explained, and it eschews panaceas. The essentials of the subject are well covered, and difficult fundamentals such as the individual and group psychology of learning in adults, or the methods, effects and difficulties of discovery learning, are illustrated and explained in a manner that will not defeat beginners and should satisfy more demanding readers. *Adults Learning* will fill an important gap in the literature of adult education, and should be widely welcomed by the organisers of training courses.

K.T.E.

New Publications from the DES

Published in June

Potential and Progress in a Second Culture (Education Survey No. 10)
Price 30p (by post 32½p)

Camping in Education (Education Pamphlet No. 58)
Price 65p (by post 69½p)

Out this month

Physical Education for the Physically Handicapped
Price 40p (by post 42½p)

Coming shortly, prices to be announced

Art in Schools
Museums in Education
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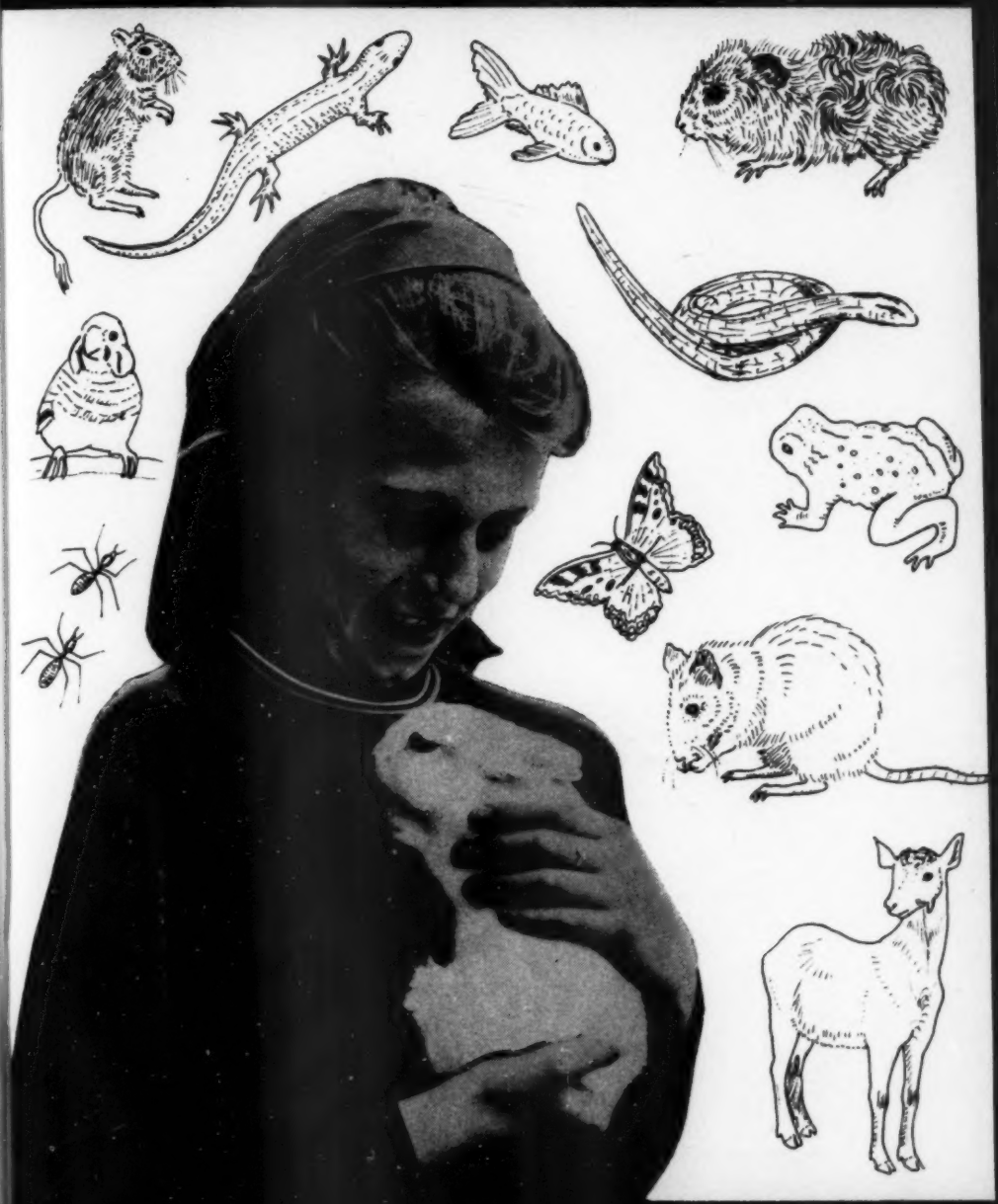
DD. 502115 K84

Keeping Animals in Schools

A HANDBOOK FOR TEACHERS



To be published shortly by HMSO